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(FILE 'HOME' ENTERED AT 13:10:27 ON 19 APR 2007)

L1 FILE 'REGISTRY' ENTERED AT 13:10:36 ON 19 APR 2007  
L2 STRUCTURE UPLOADED  
226 S L1 SSS FULL  
SAV TEM BRD508898/A L2

FILE 'STNGUIDE' ENTERED AT 13:12:34 ON 19 APR 2007

FILE 'REGISTRY' ENTERED AT 13:13:40 ON 19 APR 2007

L3 FILE 'CAPLUS' ENTERED AT 13:13:43 ON 19 APR 2007  
80 S L2  
SAV TEM ANS508898/A L3

FILE 'STNGUIDE' ENTERED AT 13:14:32 ON 19 APR 2007

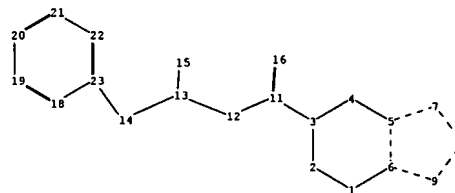
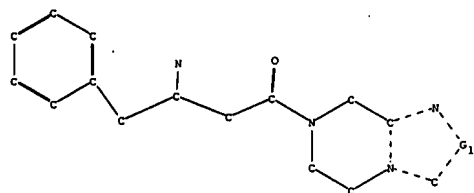
L4 FILE 'REGISTRY' ENTERED AT 14:10:17 ON 19 APR 2007  
L5 STRUCTURE UPLOADED  
226 S L4 SSS FULL SUB=L2

FILE 'STNGUIDE' ENTERED AT 14:11:39 ON 19 APR 2007

L6 FILE 'REGISTRY' ENTERED AT 14:14:46 ON 19 APR 2007  
L7 STRUCTURE UPLOADED  
226 S L6 SSS FULL SUB=L2

FILE 'CAPLUS' ENTERED AT 14:15:57 ON 19 APR 2007

=> d l3 tot bib abs hitstr



chain nodes :

11 12 13 14 15 16

ring nodes :

1 2 3 4 5 6 7 8 9 18 19 20 21 22 23

chain bonds :

3-11 11-12 11-16 12-13 13-14 13-15 14-23

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 8-9 18-19 18-23 19-20  
20-21 21-22 22-23

exact/norm bonds :

1-2 1-6 2-3 3-4 3-11 4-5 5-6 5-7 6-9 7-8 8-9 11-12 11-16 12-13  
13-14 13-15 14-23

normalized bonds :

18-19 18-23 19-20 20-21 21-22 22-23

isolated ring systems :

containing 1 : 18 :

G1:C,N

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom  
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 18:Atom  
19:Atom 20:Atom 21:Atom 22:Atom 23:Atom

L3 ANSWER 1 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2007:383544 CAPLUS  
TI Medical agent containing insulin resistance improving agent  
IN Kanda, Shoichi; Nakashima, Ryutaro  
PA Sankyo Company, Limited, Japan  
SO PCT Int. Appl., 24pp.  
CODEN: PIXXD2

DT Patent  
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2007037296	A1	20070405	WO 2006-JP319239	20060928
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			

PRAI JP 2005-283466 A 20050929

AB The present invention aims to provide a method for treating diabetes which exhibits excellent blood sugar lowering action, while having only few side effects. Specifically disclosed is a pharmaceutical product obtained by combining a DPP-IV inhibitor and an insulin resistance improving agent. For example, tablets were formulated containing rivoglitazone (as insulin resistance improving agent) and MK-0431 (DPP-IV inhibitor).

IT 654671-78-0, MK 0431 930279-24-6 930279-26-8

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(oral pharmaceuticals containing DPP-IV inhibitor and insulin resistance improving agent.)

RN 654671-78-0 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-  
alpyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate (1:1)  
(CA INDEX NAME)

CM 1

CRN 486460-32-6

CMF C16 H15 F6 N5 O

L3 ANSWER 2 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2007:351221 CAPLUS  
TI Dodecylsulfate salt of a dipeptidyl peptidase-IV inhibitor  
IN Ellison, Martha E.; Peresykin, Andrey V.; Wenslow, Robert M.  
PA Merck & Co., Inc., USA  
SO PCT Int. Appl., 25pp.  
CODEN: PIXXD2

DT Patent  
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2007035198	A2	20070329	WO 2006-US28504	20060721
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,			

KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN,  
 MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU,  
 SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG,  
 US, UZ, VC, VN, ZA, ZM, ZW  
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,  
 IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,  
 CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,  
 GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM

PRAI US 2005-702232P P 20050725

AB The dodecylsulfate salt of (2R)-4-oxo-4-[3-(trifluoromethyl)-5,6-dihydro[1,2,4]triazolo-[4,3-a]pyrazin-7(8H)-yl]-1-(2,4,5-trifluorophenyl)butan-2-amine (I) is a potent inhibitor of dipeptidyl peptidase-IV and is useful for the treatment of Type 2 diabetes. The invention also relates to a crystalline anhydrate of the dodecylsulfate salt as well as a process for its preparation, pharmaceutical compns. containing this

novel form and methods of use for the treatment of type 2 diabetes, hyperglycemia, insulin resistance, and obesity. I was prepared in a series of steps. Th salt obtained was a crystalline anhydrous substance and characterized by x-ray powder diffraction.

IT 930277-01-3P  
 RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PRP (Properties); USES (Uses) (dodecylsulfate salt of a dipeptidyl peptidase-IV inhibitor)

RN 930277-01-3 CAPLUS

CN INDEX NAME NOT YET ASSIGNED

L3 ANSWER 3 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2007:350563 CAPLUS

DN 146:330852

TI Use of a dipeptidyl peptidase IV (DPP-IV) inhibitor to reduce hypoglycemic events in antidiabetic treatment

IN Balkan, Boerk; Holmes, David Grenville; Hughes, Thomas Edward; Villhauer, Edwin Bernard

PA Novartis AG, Switz.; Novartis Pharma GmbH

SO PCT Int. Appl., 51pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007035665	A1	20070329	WO 2006-US36338	20060918
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

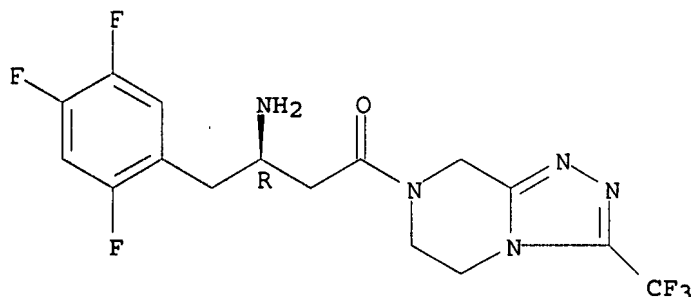
PRAI US 2005-718856P P 20050920

US 2006-786755P P 20060328

AB The invention discloses a method to reduce the hypoglycemic events, especially severe hypoglycemic events resulting from insulin treatment, wherein the patient is treated with a dipeptidyl peptidase IV inhibitor (DPP-IV inhibitor), e.g. vildagliptin, or a pharmaceutically acceptable salt thereof.

IT 486460-32-6, Sitagliptin  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)  
 (dipeptidyl peptidase IV inhibitors for reduction of hypoglycemic events in  
 antidiabetic treatment)  
 RN 486460-32-6 CAPLUS  
 CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-  
 a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.



L3 ANSWER 4 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2007:227665 CAPLUS  
 DN 146:244370  
 TI Drug containing FBPase inhibitor and DPP-IV inhibitor  
 IN Okuno, Akira; Yoshida, Taishi  
 PA Sankyo Company, Limited, Japan  
 SO PCT Int. Appl., 21pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2007023754	A1	20070301	WO 2006-JP316292	20060821
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			

PRAI JP 2005-239310 A 20050822  
 OS MARPAT 146:244370

AB It is intended to provide a remedy for diabetes which exerts little side effects even in prolonged drug administration and is efficacious for a large number of diabetic patients. Disclosed is a drug comprising a combination of an fructose 1,6-biphosphatase (FBPase) inhibitor with a dipeptidyl peptidase IV (DPP-IV) inhibitor. Thus, the effect of combination of 2-amino-5-isobutyl-4-[2-[5-[N,N'-bis((S)-1-ethoxycarbonyl)ethyl]phosphonamide]furanyl]thiazole (I) and MK-0431 on glucose tolerance in Zucker Diabetic Fatty (ZDF) rats was examined Also, a capsule composition containing I 50, MK-0431 25, lactose 75, corn starch 58, and magnesium stearate 2 mg was formulated.

IT 654671-78-0, MK-0431 925668-18-4  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (antidiabetic drugs comprising combination of FBPase inhibitors and DPP-IV inhibitors)

RN 654671-78-0 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate (1:1)  
 (CA INDEX NAME)

L3 ANSWER 5 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2007:204629 CAPLUS

DN 146:329922

TI Effect of a single cyclosporine dose on the single-dose pharmacokinetics of sitagliptin (MK-0431), a dipeptidyl peptidase-4 inhibitor, in healthy male subjects

AU Krishna, Rajesh; Bergman, Arthur; Larson, Patrick; Cote, Josee; Lasseter, Kenneth; Dilzer, Stacey; Wang, Amy; Zeng, Wei; Chen, Li; Wagner, John; Herman, Gary

CS Merck and Co, Inc, Whitehouse Station, NJ, USA

SO Journal of Clinical Pharmacology (2007), 47(2), 165-174  
 CODEN: JPCPBR; ISSN: 0091-2700

PB Sage Publications

DT Journal

LA English

AB Sitagliptin (MK-0431) is an orally active, potent, and selective dipeptidyl peptidase-4 inhibitor used for the treatment of patients with type 2 diabetes mellitus. Sitagliptin has been shown to be a substrate for P-glycoprotein in preclin. studies. Cyclosporine was used as a probe P-glycoprotein inhibitor at a high dose to evaluate the potential effect of potent P-glycoprotein inhibition on single-dose sitagliptin pharmacokinetics in healthy male subjects. Eight healthy young men received a single oral 600-mg dose of cyclosporine with a single 100-mg oral sitagliptin dose and a single oral 100-mg sitagliptin dose alone in an open-label, randomized, 2-period, crossover study. Single doses of sitagliptin with or without single doses of cyclosporine were generally well tolerated. The sitagliptin AUC<sub>0-∞</sub> geometric mean ratio was 1.29 with a 90% confidence interval of (1.24, 1.34). The sitagliptin C<sub>max</sub> geometric mean ratio was 1.68 with a 90% confidence interval of (1.35, 2.08). Cyclosporine coadministration did not appear to affect apparent sitagliptin renal clearance, t<sub>1/2</sub>, or C<sub>24</sub> h, suggesting that effects of these high doses of cyclosporine are more likely due to enhanced absorption of sitagliptin, potentially through inhibition of intestinal P-glycoprotein. These results rationalize the use of a single high-dose cyclosporine as a probe inhibitor of P-glycoprotein for compound candidates whose elimination is less dependent on CYP3A4-mediated metabolism

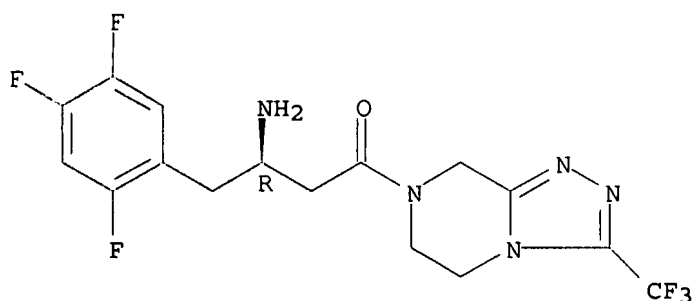
IT 486460-32-6, Sitagliptin

RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (single dose of sitagliptin with or without Neoral was well tolerated and latter did not appear to affect renal clearance but modestly increased maximal plasma concentration of former in healthy male subject)

RN 486460-32-6 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 6 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2007:204628 CAPLUS

DN 146:329921

TI Multiple-dose administration of sitagliptin, a dipeptidyl peptidase-4 inhibitor, does not alter the single-dose pharmacokinetics of rosiglitazone in healthy subjects

AU Mistry, Goutam C.; Bergman, Arthur J.; Luo, Wen-Lin; Cilissen, Caroline; Haazen, Wouter; Davies, Michael J.; Gottesdiener, Keith M.; Wagner, John A.; Herman, Gary A.

CS Merck and Co, Inc, Whitehouse Station, NJ, USA

SO Journal of Clinical Pharmacology (2007), 47(2), 159-164  
CODEN: JCPCBR; ISSN: 0091-2700

PB Sage Publications

DT Journal

LA English

AB Sitagliptin, a dipeptidyl peptidase-4 inhibitor, is an incretin enhancer that is approved for the treatment of type 2 diabetes. Sitagliptin is mainly renally eliminated and not a potent inhibitor of CYP450 enzymes in vitro. Rosiglitazone, a thiazolidinedione, is an insulin sensitizer and mainly metabolized by CYP2C8. Since both agents may potentially be coadministered, the purpose of this study was to examine the effects of sitagliptin on rosiglitazone pharmacokinetics. In this open-label, randomized, 2-period, crossover study, 12 healthy normoglycemic subjects, 21 to 44 years, received single 4-mg doses of rosiglitazone alone in one period and coadministered with sitagliptin on day 5 following a multiple-dose regimen for sitagliptin (200 mg once daily + 5 days) in the other period. The geometric mean ratios and 90% confidence intervals ([rosiglitazone + sitagliptin]/rosiglitazone) for rosiglitazone AUC<sub>0-∞</sub> and C<sub>max</sub> were 0.98 (0.93, 1.02) and 0.99 (0.88, 1.12), resp. In conclusion, sitagliptin did not alter the pharmacokinetics of rosiglitazone in healthy subjects.

IT 486460-32-6, Sitagliptin

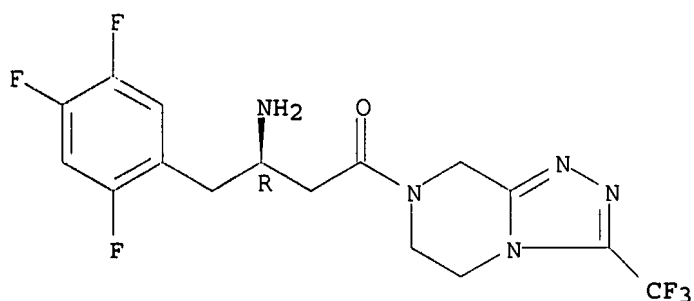
RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(coadministration of multiple-dose sitagliptin did not alter single-dose pharmacokinetics of Avandia in healthy human)

RN 486460-32-6 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ~~ANSWER 7 OF 80~~ CAPLUS COPYRIGHT 2007 ACS on STN

AN 2007:173034 CAPLUS

DN 146:236092

TI Composition comprising DPP-IV inhibitor

IN Loeffler, Bernd Michael; MacDonald, Alexander; Rocha, Cynthia; Worth, Eric

PA F. Hoffmann-La Roche A.-G., Switz.

SO PCT Int. Appl., 58pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2007017423	A2	20070215	WO 2006-EP64933	20060802
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

PRAI EP 2005-107393 A 20050811

OS MARPAT 146:236092

AB The present invention refers to pharmaceutical composition comprising a DPP-IV inhibitor. Thus, coated tablet 100 mg was prepared comprising (2S)-1-([1,1-dimethyl-3-(4-pyridin-3-yl-imidazol-1-yl)-propylamino]-acetyl)-pyrrolidine-2-carbonitrile 50 mg, Avicel PH-101 56.4 mg, sodium stearyl fumarate 4.8125 mg, talc 1.925 mg, and Eudragit S: Eudragit L (25:75) 25 mg.

IT 486460-32-6

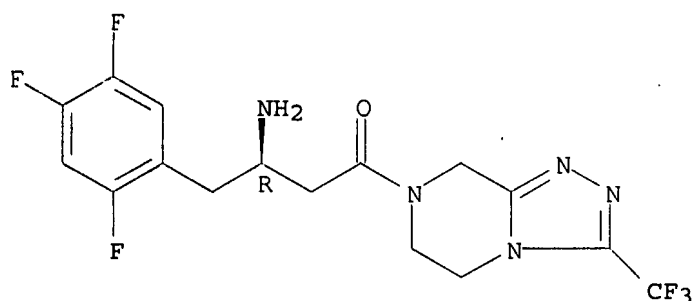
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(composition comprising DPP-IV inhibitor)

RN 486460-32-6 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.





L3 ~~ANSWER 8 OF 30~~ CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2007:61707 CAPLUS  
 DN 146:149027  
 TI Composition comprising combination of cannabinoid receptor-1 antagonist  
 and DPP-IV inhibitor  
 IN Milosavljevic-Ristic, Smiljana  
 PA Novartis A.-G., Switz.; Novartis Pharma G.m.b.H.  
 SO PCT Int. Appl., 49pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

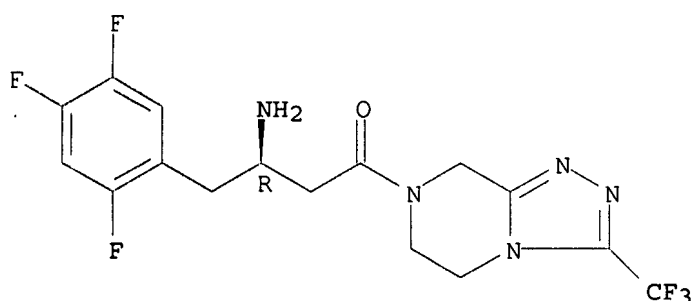
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2007006790	A2	20070118	WO 2006-EP64117	20060711
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,				
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	GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,				
	KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN,				
	MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU,				
	SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG,				
	US, UZ, VC, VN, ZA, ZM, ZW				
	RW:				
	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,				
	IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,				
	CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,				
	GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,				
	KG, KZ, MD, RU, TJ, TM				
PRAI	US 2005-698304P	P	20050712		

AB The present invention relates to a combination, such as a combined preparation or pharmaceutical composition, resp., comprising of a DPP IV inhibitor or a pharmaceutically acceptable salt thereof and comprising at least one CB1 antagonist, or a pharmaceutically acceptable salt thereof. The present invention furthermore relates to the use of such a combination for the prevention of, delay of progression of, treatment of diseases and disorders that may be inhibited by DPP IV inhibition, appetency disorders or substance abuse disorders. Thus, combination of vildagliptin 50 mg and rimionabant 20 mg was used for improvement of cognitive function.

IT 486460-32-6, Sitagliptin  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (composition comprising combination of cannabinoid receptor-1 antagonist and DPP-IV inhibitor)

RN 486460-32-6 CAPLUS  
 CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

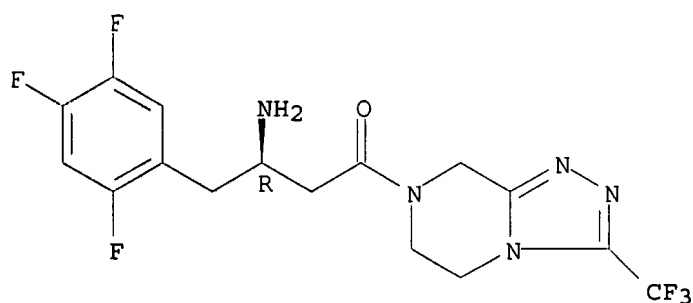
Absolute stereochemistry.



L3 ANSWER 9 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2007:10527 CAPLUS  
 DN 146:135224  
 TI Efficacy and safety of the dipeptidyl peptidase-4 inhibitor sitagliptin added to ongoing metformin therapy in patients with type 2 diabetes inadequately controlled with metformin alone  
 AU Charbonnel, Bernard; Karasik, Avraham; Liu, Ji; Wu, Mei; Meininger, Gary  
 CS SITAGLIPTIN STUDY 020 GROUP, Centre Hospitalier Universitaire de Nantes, Nantes, Fr.  
 SO Diabetes Care (2006), 29(12), 2638-2643  
 CODEN: DICAD2; ISSN: 0149-5992  
 PB American Diabetes Association, Inc.  
 DT Journal  
 LA English  
 AB OBJECTIVE: The efficacy and safety of the dipeptidyl peptidase-4 inhibitor, sitagliptin, added to ongoing metformin therapy, were assessed in patients with type 2 diabetes who had inadequate glycemic control (HbA1c [A1C]  $\geq 7$  and  $\leq 10\%$ ) with metformin alone. RESEARCH DESIGN AND METHODS: After a screening diet/exercise run-in period, a metformin dose titration/stabilization period, and a 2-wk, single-blind, placebo run-in period, 701 patients, aged 19-78 years, with mild to moderate hyperglycemia (mean A1C 8.0%) receiving ongoing metformin ( $\geq 1,500$  mg/day) were randomly assigned to receive the addition of placebo or sitagliptin 100 mg once-daily in a 1:2 ratio for 24 wk. Patients exceeding specific glycemic limits were provided rescue therapy (pioglitazone) until the end of the study. The efficacy analyses were based on an all-patients-treated population using an ANCOVA and excluded data obtained after glycemic rescue. RESULTS: At week 24, sitagliptin treatment led to significant redns. compared with placebo in A1C ( $-0.65\%$ ), fasting plasma glucose, and 2-h postmeal glucose. Fasting insulin, fasting C-peptide, fasting proinsulin-to-insulin ratio, postmeal insulin and C-peptide areas under the curve (AUCs), postmeal insulin AUC-to-glucose AUC ratio, homeostasis model assessment of  $\beta$ -cell function, and quant. insulin sensitivity check index were significantly improved with sitagliptin relative to placebo. A significantly greater proportion of patients achieved an A1C  $< 7\%$  with sitagliptin (47.0%) than with placebo (18.3%). There was no increased risk of hypoglycemia or gastrointestinal adverse experiences with sitagliptin compared with placebo. Body weight decreased similarly with sitagliptin and placebo. CONCLUSION: Sitagliptin 100 mg once-daily added to ongoing metformin therapy was efficacious and well tolerated in patients with type 2 diabetes who had inadequate glycemic control with metformin alone.  
 IT 486460-32-6, Sitagliptin  
 RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (sitagliptin 100 mg once-daily added to ongoing metformin therapy was efficacious and well tolerated in patient with type 2 diabetes who had inadequate glycemic control with metformin alone)  
 RN 486460-32-6 CAPLUS  
 CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-

alpyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.



L3 (ANSWER 10 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2007:10526 CAPLUS

DN 146:135223

TI Effect of the dipeptidyl peptidase-4 inhibitor sitagliptin as monotherapy on glycemic control in patients with type 2 diabetes

AU Aschner, Pablo; Kipnes, Mark S.; Lunceford, Jared K.; Sanchez, Matilde; Mickel, Carolyn; Williams-Herman, Debora E.

CS SITAGLIPTIN STUDY 021 GROUP, Colombian Diabetes Association, Bogota, Colombia

SO Diabetes Care (2006), 29(12), 2632-2637

CODEN: DICAD2; ISSN: 0149-5992

PB American Diabetes Association, Inc.

DT Journal

LA English

AB OBJECTIVE: To examine the efficacy and safety of once-daily oral sitagliptin as monotherapy in patients with type 2 diabetes. RESEARCH DESIGN AND METHODS: In a randomized, double-blind, placebo-controlled study, 741 patients (baseline HbA1c [A1C] 8.0%) were randomized to sitagliptin 100 or 200 mg or placebo for 24 wk. RESULTS: Sitagliptin 100 and 200 mg produced significant (P < 0.001) placebo-subtracted redns. in A1C (-0.79 and -0.94%, resp.) and fasting plasma glucose (-1.0 mmol/l [-17.1 mg/dL] and -1.2 mmol/l [-21.3 mg/dL], resp.). Patients with baseline A1C ≥9% had greater redns. in placebo-subtracted A1C with sitagliptin 100 and 200 mg (-1.52 and -1.50%, resp.) than those with baseline A1C <8% (-0.57 and -0.65%) or ≥8 to <9.0% (-0.80 and -1.13%, resp.). In a meal tolerance test, sitagliptin 100 and 200 mg significantly decreased 2-h postprandial glucose (PPG) (placebo-subtracted PPG -2.6 mmol/l [-46.7 mg/dL] and -3.0 mmol/l [-54.1 mg/dL], resp.). Results for the above key efficacy parameters were not significantly different between sitagliptin doses. Homeostasis model assessment of β-cell function and proinsulin-to-insulin ratio improved with sitagliptin. The incidence of hypoglycemia was similar, and overall gastrointestinal adverse experiences were slightly higher with sitagliptin. No meaningful body weight changes from baseline were observed with

sitagliptin 100 (-0.2 kg) or 200 mg (-0.1 kg). The body weight change with placebo (-1.1 kg) was significantly (P < 0.01) different from that observed with sitagliptin. CONCLUSIONS: In this 24-wk study, once-daily sitagliptin monotherapy improved glycemic control in the fasting and postprandial states, improved measures of β-cell function, and was well tolerated in patients with type 2 diabetes.

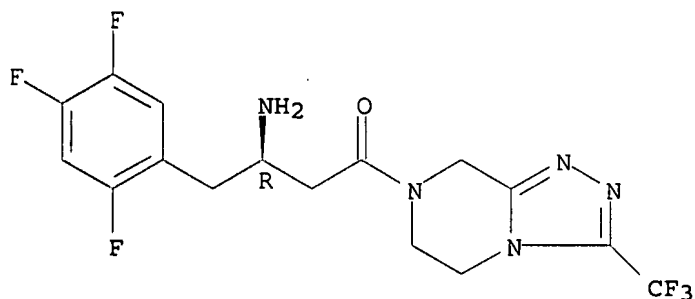
IT 486460-32-6, Sitagliptin

RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (once daily sitagliptin monotherapy improved glycemic control in patient with type 2 diabetes)

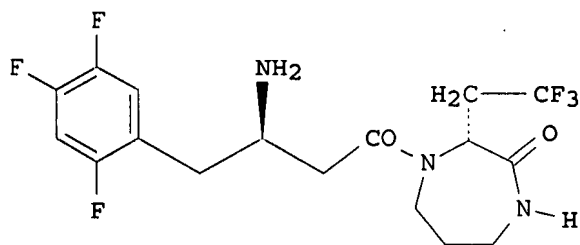
RN 486460-32-6 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-  
a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.



L3 ANSWER: 11 OF 80. CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2007:2727 CAPLUS  
DN 146:176193  
TI (3R)-4-[(3R)-3-Amino-4-(2,4,5-trifluorophenyl)butanoyl]-3-(2,2,2-trifluoroethyl)-1,4-diazepan-2-one, a selective dipeptidyl peptidase IV inhibitor for the treatment of type 2 diabetes  
AU Biftu, Tesfaye; Feng, Dennis; Qian, Xiaoxia; Liang, Gui-Bai; Kieczkowski, Gerard; Eiermann, George; He, Huaibing; Leiting, Barbara; Lyons, Kathy; Petrov, Aleksandr; Sinha-Roy, Ranabir; Zhang, Bei; Scapin, Giovanna; Patel, Sangita; Gao, Ying-Duo; Singh, Suresh; Wu, Joseph; Zhang, Xiaoping; Thornberry, Nancy A.; Weber, Ann E.  
CS Department of Medicinal Chemistry, Merck Research Laboratories, Merck & Co., Inc., Rahway, NJ, 07065, USA  
SO Bioorganic & Medicinal Chemistry Letters (2007), 17(1), 49-52  
CODEN: BMCLE8; ISSN: 0960-894X  
PB Elsevier Ltd.  
DT Journal  
LA English  
GI



I

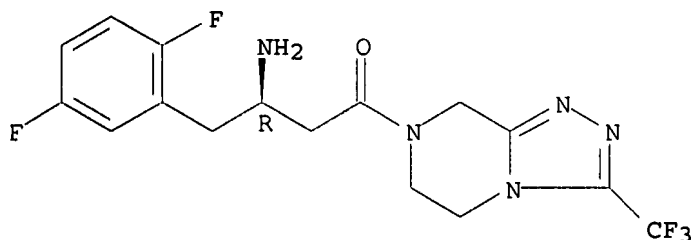
AB Replacement of the triazolopiperazine ring of sitagliptin (DPP-4 IC<sub>50</sub> = 18 nM) with 3-(2,2,2-trifluoroethyl)-1,4-diazepan-2-one gave dipeptidyl peptidase IV (DPP-4) inhibitor I which is potent (DPP-4 IC<sub>50</sub> = 2.6 nM), selective, and efficacious in an oral glucose tolerance test in mice. It was selected for extensive preclin. development as a potential back-up candidate to sitagliptin.  
IT 486460-31-5 486460-32-6, Sitagliptin 611240-24-5  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(diazepanones as dipeptidyl peptidase IV inhibitors)

RN 486460-31-5 CAPLUS

CN 1,2,4-Triazolo[4,3-a]pyrazine, 7-[(3R)-3-amino-4-(2,5-difluorophenyl)-1-oxobutyl]-5,6,7,8-tetrahydro-3-(trifluoromethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L3 ANSWER/12 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:1338372 CAPLUS

DN 146:68738

TI Direct compression formulation of dipeptidylpeptidase IV inhibitors

IN Kowalski, James; Lakshman, Jay Parthiban; Patel, Arun P.

PA Novartis A.-G., Switz.; Novartis Pharma G.m.b.H.

SO PCT Int. Appl., 59pp.

CODEN: PIXXD2

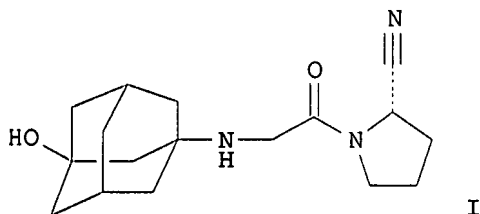
DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006135693	A2	20061221	WO 2006-US22336	20060608
	WO 2006135693	A3	20070215		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
PRAI	US 2005-689739P	P	20050610		
	US 2005-690527P	P	20050614		
	US 2005-690814P	P	20050615		

GI



I

AB Dipeptidylpeptidase IV inhibitor (herein referred to as DPP-IV) that may

be 98.5 100% pure is a high-dose drug capable of being directly compressed with a glitazone and specific excipients into solid form dosage forms, such as tablets and capsules having desired, hardness, disintegrating ability and acceptable dissoln. characteristics. DPP-IV is not inherently compressible and thus presents formulation problems. Excipients used in the formulation enhance the flow and compaction properties of the drug and tableting mix. Optimal flow contributes to uniform die fill and weight control. The binder used ensures sufficient cohesive properties that allow DPP-IV to be compressed using the direct compression method. The tablets produced provide an acceptable in vitro dissoln. profile. Tablets were prepared containing vildagliptin (I) (DPP-IV inhibitor), pioglitazone, microcryst. cellulose, Na starch glycolate and Mg stearate.

IT 654671-78-0, MK-0431

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(direct compression formulation of dipeptidylpeptidase IV inhibitors)

RN 654671-78-0 CAPLUS

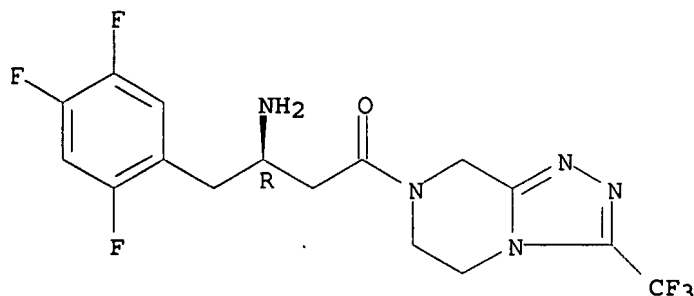
CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate (1:1)  
(CA INDEX NAME)

CM 1

CRN 486460-32-6

CMF C16 H15 F6 N5 O

Absolute stereochemistry.



L3 ANSWER 13 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:1328428 CAPLUS

DN 146:114748

TI Efficacy and safety of the dipeptidyl peptidase-4 inhibitor sitagliptin added to ongoing pioglitazone therapy in patients with type 2 diabetes: a 24-week, multicenter, randomized, double-blind, placebo-controlled, parallel-group study

AU Rosenstock, Julio; Brazg, Ronald; Andryuk, Paula J.; Lu, Kaifeng; Stein, Peter

CS Sitagliptin Study 019 Group, Dallas Diabetes and Endocrine Center, Dallas, TX, USA

SO Clinical Therapeutics (2006), 28(10), 1556-1568

CODEN: CLTHDG; ISSN: 0149-2918

PB Excerpta Medica, Inc.

DT Journal

LA English

AB Objective: The efficacy and tolerability of the dipeptidyl peptidase-4 inhibitor sitagliptin added to ongoing pioglitazone therapy were assessed in patients with type 2 diabetes and inadequate glycemic control (glycosylated Hb [HbA1c]  $\geq 7\%$  and  $\leq 10\%$ ) while receiving a stable dose of pioglitazone. Methods: This was a 24-wk, multicenter, randomized, double-blind, placebo-controlled, parallel-group study in

patients aged  $\geq 18$  years (ClinicalTrials.gov NCT00086502). At screening, all patients began a diet/exercise program that continued throughout the study period. Patients taking antihyperglycemic therapy other than pioglitazone underwent a washout of this therapy and entered an 8- to 14-wk open-label pioglitazone dose-titration/stabilization period. Patients with an HbA1c  $\geq 7\%$  and  $\leq 10\%$  at the end of this period entered a 2-wk, single-blind, placebo run-in period (total duration of run-in period, up to 21 wk). Patients who had been receiving pioglitazone monotherapy (30 or 45 mg/d) and had an HbA1c  $\geq 7\%$  and  $\leq 10\%$  entered the 2-wk, single-blind, placebo run-in period directly. Thus, at the time of randomization, all patients were receiving ongoing pioglitazone (30 or 45 mg/d). Patients were randomized in a 1:1 ratio to receive sitagliptin 100 mg once daily or placebo for 24 wk. The primary efficacy end point was the change from baseline in HbA1c at week 24. Secondary efficacy end points included the change from baseline in fasting plasma glucose (FPG), insulin, and proinsulin; the Homeostasis Model Assessment  $\beta$ -cell function and insulin-resistance indexes; the proinsulin/insulin ratio; the Quant. Insulin Sensitivity Check Index; the percent changes from baseline in selected lipid parameters; the proportion of patients meeting the American Diabetes Association HbA1c goal of  $< 7.0\%$ ; the proportion of patients requiring metformin rescue therapy; and the time to the initiation of rescue therapy. Results: One hundred seventy-five patients were randomized to receive sitagliptin, and 178 were randomized to receive placebo. The mean (SD) baseline HbA1c value was  $8.1\%$  ( $0.8$ ) in the sitagliptin group and  $8.0\%$  ( $0.8$ ) in the placebo group. After 24 wk, sitagliptin added to pioglitazone therapy was associated with significant redns. compared with placebo in HbA1c (between-treatment difference in least squares [LS] mean change from baseline:  $-0.70\%$ ; 95% CI,  $-0.85$  to  $-0.54$ ;  $P < 0.001$ ) and FPG ( $-17.7$  mg/dL; 95% CI,  $-24.3$  to  $-11.0$ ;  $P < 0.001$ ). Mean HbA1c values at end point were  $7.2\%$  ( $0.9$ ) and  $7.8\%$  ( $1.1$ ) in the resp. treatment groups, and the proportions of patients reaching a target HbA1c of  $< 7.0\%$  were  $45.4\%$  and  $23.0\%$  ( $P < 0.001$ ). Significant redns. in fasting serum proinsulin levels and the proinsulin/insulin ratio were seen with sitagliptin treatment compared with placebo (both,  $P < 0.01$ ). Sitagliptin was generally well tolerated, with no increased risk of hypoglycemia compared with placebo (2 vs 0 patients, resp.). The number of patients discontinuing the study due to clin. adverse experiences (10 [ $5.7\%$ ] vs 2 [ $1.1\%$ ]) and the incidence of abdominal pain ( $3.4\%$  vs  $0\%$ ) were significantly greater in the sitagliptin group compared with the placebo group (both,  $P < 0.05$ ). The LS mean change in body weight from baseline did not differ significantly between sitagliptin or placebo added to pioglitazone therapy (between-treatment difference in LS mean change from baseline:  $0.2$  kg; 95% CI,  $-0.5$  to  $1.0$ ). Conclusion: In this 24-wk study, sitagliptin 100 mg once daily added to ongoing pioglitazone therapy was effective and well tolerated in these patients with type 2 diabetes who had not achieved adequate glycemic control with pioglitazone alone.

IT 486460-32-6, Sitagliptin

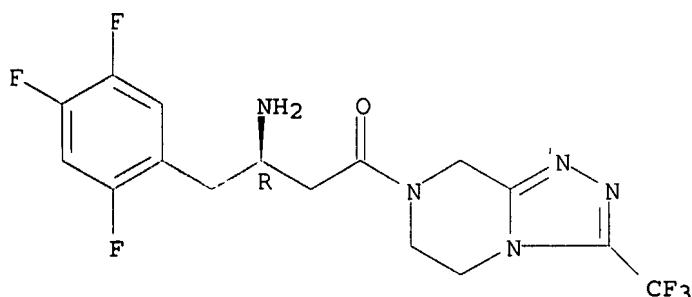
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(dipeptidyl peptidase-4 inhibitor sitagliptin added to pioglitazone therapy reduced glycosylated Hb, fasting plasma glucose and proinsulin than pioglitazone alone in patient with type 2 diabetes mellitus)

RN 486460-32-6 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.



L3 ANSWER 14 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2006:1320516 CAPLUS  
 DN 146:114024  
 TI DPP-4 inhibitors and their potential role in the management of type 2 diabetes  
 AU Barnett, A.  
 CS Department of Medicine, University of Birmingham and Heart of England National Health Service Foundation Trust (Teaching), Birmingham, UK  
 SO International Journal of Clinical Practice (2006), 60(11), 1454-1470  
 CODEN: IJCPF9; ISSN: 1368-5031  
 PB Blackwell Publishing Ltd.  
 DT Journal; General Review  
 LA English  
 AB A review. The dipeptidyl peptidase 4 (DPP-4) inhibitors enhance the body's own ability to control blood glucose by increasing the active levels of incretin hormones in the body. Their mechanism of action is distinct from any existing class of oral glucose-lowering agents. They control elevated blood glucose by triggering pancreatic insulin secretion, suppressing pancreatic glucagon secretion, and signalling the liver to reduce glucose production. The leading DPP-4 inhibitors have shown clin. significant HbA1c redns. up to 1 yr of treatment and offer many potential advantages over existing diabetes therapies including a low risk of hypoglycemia, no effect on body weight, and the potential, based on animal and in vitro studies, for the regeneration and differentiation of pancreatic  $\beta$ -cells. They are efficacious as monotherapy and also in combination with commonly prescribed antidiabetic agents and are suitable for once-daily oral dosing. Consequently, many DPP-4 inhibitors such as vildagliptin (Galvus; LAF-237), sitagliptin (Januvia; MK-0431), and saxagliptin (BMS-477118) have advanced into late-stage human clin. trials. Search strategy and selection criteria This review was built on a systematic MEDLINE search for publications on the subject with the key words: DPP-4 inhibitor; vildagliptin (LAF-237); sitagliptin (MK-0431); saxagliptin (BMS-477118); and type 2 diabetes; up to August 2006. Meeting abstrs. were also searched, as much of the data currently only exists in abstract form. Take home message for clinician The DPP-4 inhibitors appear to have great potential for the treatment of type 2 diabetes, but time will tell if this will be realized. While they do not lower glucose to a greater extent than existing therapies, they offer many potential advantages, including the ability to achieve sustainable redns. in HbA1c with a well-tolerated agent that has a low risk of hypoglycemia and no weight gain, and which can be administered as a once-daily oral dose.  
 IT 654671-78-0, Januvia  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (dipeptidyl peptidase 4 inhibitor Januvia might have role in management of type 2 diabetes in human)  
 RN 654671-78-0 CAPLUS  
 CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-*a*]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate (1:1) (CA INDEX NAME)

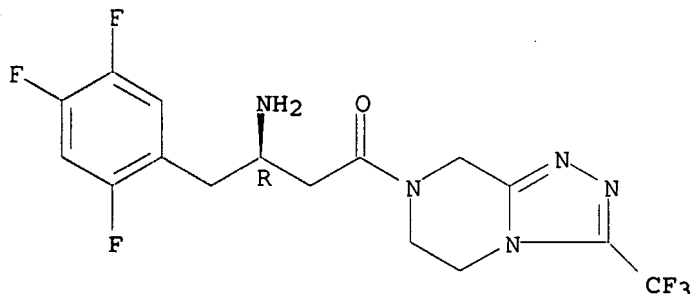


CM 1

CRN 486460-32-6

CMF C16 H15 F6 N5 O

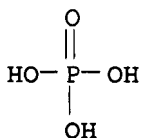
Absolute stereochemistry.



CM 2

CRN 7664-38-2

CMF H3 O4 P



L3 ANSWER 15 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:1274234 CAPLUS

DN 146:49995

TI The development of a stable, coated pellet formulation of a water-sensitive drug, a case study: development of a stable core formulation

AU Fitzpatrick, Shaun; Taylor, Scott; Booth, Steven W.; Newton, Michael J.

CS Development Laboratories, Merck Sharp and Dohme Ltd., Hoddesdon, Herts, UK

SO Pharmaceutical Development and Technology (2006), 11(4), 521-528

CODEN: PDTEFS; ISSN: 1083-7450

PB Taylor & Francis, Inc.

DT Journal

LA English

AB A development program has been carried out to provide a stable extrusion/spheronization pellet formulation for a highly water-soluble drug, sitagliptin, which undergoes a change in phys. form on processing and is subject to hydrolytic decomposition. A conventional extrusion/spheronization formulation resulted in significant degradation of the drug. The inclusion of glyceryl monostearate into the formulation was found to reduce the water levels required to such a level that there was no significant degradation of the drug during processing to form pellets. The use of a ram extruder to screen formulations with small quantities minimizes the need for the drug in the formulation-screening process, and the results from this method of extrusion were found to be translatable to the use of a screen extruder, which allowed scale-up of the process.

IT 486460-32-6, Sitagliptin

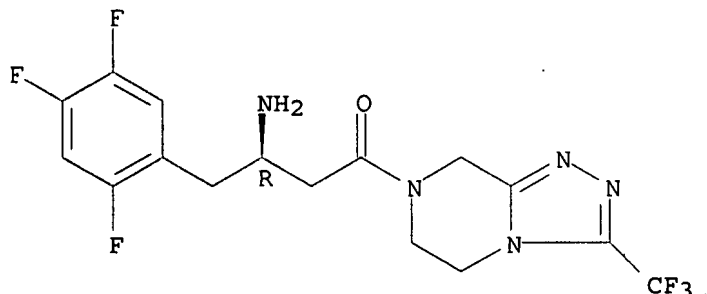
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(stable, coated pellet formulation of a water-sensitive drug with a stable core formulation)

RN 486460-32-6 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-  
a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 16 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:1266432 CAPLUS

DN 146:92587

TI Tolerability and pharmacokinetics of metformin and the dipeptidyl  
peptidase-4 inhibitor sitagliptin when co-administered in patients with  
type 2 diabetes

AU Herman, Gary A.; Bergman, Arthur; Yi, Bingming; Kipnes, Mark

CS Sitagliptin Study 012 Group, Merck Research Laboratories, Rahway, NJ, USA

SO Current Medical Research and Opinion (2006), 22(10), 1939-1947

CODEN: CMROCX; ISSN: 0300-7995

PB LibraPharm Ltd.

DT Journal

LA English

AB Objective: As part of the clin. development of sitagliptin, a dipeptidyl  
peptidase-4 inhibitor, for the treatment of type 2 diabetes, the potential  
for pharmacokinetic interactions with other antihyperglycemic agents used  
in managing patients with type 2 diabetes are being carefully evaluated.  
The purposes of this study were to evaluate the tolerability of  
co-administered sitagliptin and metformin and effects of sitagliptin on  
metformin pharmacokinetics as well as metformin on sitagliptin  
pharmacokinetics under steady-state conditions. Methods: This  
placebo-controlled, multiple-dose, crossover study in patients with type 2  
diabetes assessed the tolerability of co-administered sitagliptin (50 mg  
b.i.d.) with metformin (1000 mg b.i.d.). Patients received, in a  
randomized crossover manner, three treatments (each of 7 days duration):  
50 mg sitagliptin twice daily and placebo to metformin twice daily; 1000  
mg of metformin twice daily and placebo to sitagliptin twice daily;  
concomitant administration of 50 mg of sitagliptin twice daily and 1000 mg  
of metformin twice daily. Following dosing on Day 7 of each treatment  
period, these pharmacokinetic parameters were determined for plasma sitagliptin  
and metformin: area under the plasma concns.-time curve over the dosing  
interval (AUC<sub>0-12 h</sub>), maximum observed plasma concns. (C<sub>max</sub>), and time of  
occurrence of maximum observed plasma concns. (T<sub>max</sub>). Renal clearance was also  
determined for sitagliptin. Results: In this study, no adverse experiences  
were reported by 11 of 13 patients. Two patients had adverse experiences,  
which were not related to study drugs as determined by the investigators. The  
mean metformin plasma concentration-time profiles were nearly identical with or  
without sitagliptin co-administration [metformin AUC<sub>0-12 h</sub> geometric mean  
ratio (GMR; [metformin + sitagliptin]/metformin)] was 1.02 (90% CI 0.95,  
1.09). Similarly metformin administration did not alter the plasma

sitagliptin pharmacokinetics [sitagliptin AUC0-12 h GMR ([sitagliptin + metformin]/sitagliptin)] was 1.02 (90% CI 0.97, 1.08) or renal clearance of sitagliptin. No efficacy measurements (glycosylated Hb or fasting plasma glucose) were obtained during this study. Urinary pharmacokinetics for metformin were not determined due to the lack of effect of sitagliptin on plasma metformin pharmacokinetics. Conclusions: In this study, co-administration of sitagliptin and metformin was generally well tolerated in patients with type 2 diabetes and did not meaningfully alter the steady-state pharmacokinetics of either agent.

IT 486460-32-6, Sitagliptin

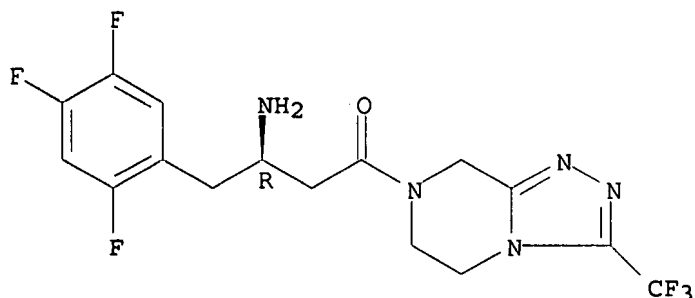
RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(co-administration of sitagliptin and metformin was well tolerated and did not alter steady-state pharmacokinetics of either agent in patient with type 2 diabetes)

RN 486460-32-6 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 17 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:1256551 CAPLUS

DN 146:20305

TI Combination of a dipeptidyl peptidase-IV inhibitor and a dual PPAR agonist for the treatment of diabetes and obesity

IN Thornberry, Nancy A.; Kaufman, Keith D.

PA USA

SO U.S. Pat. Appl. Publ., 23pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2006270722	A1	20061130	US 2006-440198	20060524
PRAI	US 2005-686076P	P	20050531		

AB The present invention relates to pharmaceutical compns. comprising a combination of a particular dipeptidyl peptidase-IV (DPP-IV) inhibitor and a particular PPAR- $\alpha/\gamma$  dual agonist, kits containing such combinations and methods of using such compns. for the treatment of diabetes, diabetes associated with obesity, diabetes-related disorders, obesity, and obesity-related disorders.

IT 486460-32-6P 654671-78-0P, MK-0431

RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

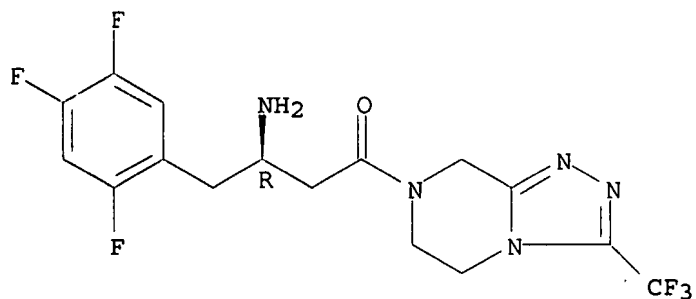
(combination of dipeptidyl peptidase-IV inhibitor and dual PPAR agonist)

for treatment of diabetes and obesity)

RN 486460-32-6 CAPLUS

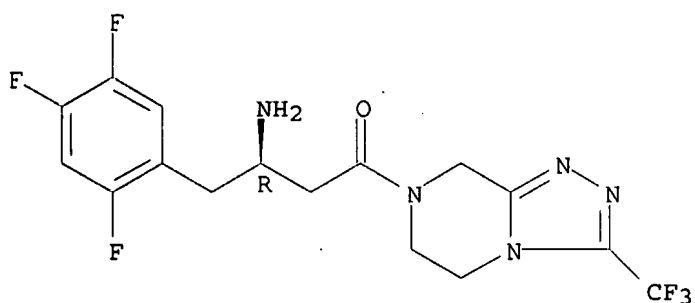
CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.



L3 ANSWER 18 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2006:1212876 CAPLUS  
 DN 146:38812  
 TI Effect of single oral doses of sitagliptin, a dipeptidyl peptidase-4 inhibitor, on incretin and plasma glucose levels after an oral glucose tolerance test in patients with type 2 diabetes  
 AU Herman, Gary A.; Bergman, Arthur; Stevens, Catherine; Kotey, Paul; Yi, Bingming; Zhao, Peng; Dietrich, Bruno; Golor, George; Schrodter, Andreas; Keymeulen, Bart; Lasseter, Kenneth C.; Kipnes, Mark S.; Snyder, Karen; Hilliard, Deborah; Tanen, Michael; Cilissen, Caroline; De Smet, Marina; de Lepeleire, Inge; Van Dyck, Kristien; Wang, Amy Q.; Zeng, Wei; Davies, Michael J.; Tanaka, Wesley; Holst, Jens J.; Deacon, Carolyn F.; Gottesdiener, Keith M.; Wagner, John A.  
 CS Merck Research Laboratories, Rahway, NJ, 07065, USA  
 SO Journal of Clinical Endocrinology and Metabolism (2006), 91(11), 4612-4619  
 CODEN: JCEMAZ; ISSN: 0021-972X  
 PB Endocrine Society  
 DT Journal  
 LA English  
 AB In response to a meal, glucagon-like peptide-1 (GLP-1) and glucose-dependent insulintropic peptide (GIP) are released and modulate glycemic control. Normally these incretins are rapidly degraded by dipeptidyl peptidase-4 (DPP-4). DPP-4 inhibitors are a novel class of oral antihyperglycemic agents in development for the treatment of type 2 diabetes. The degree of DPP-4 inhibition and the level of active incretin augmentation required for glucose lowering efficacy after an oral glucose tolerance test (OGTT) were evaluated. The objective of the study was to examine the pharmacodynamics, pharmacokinetics, and tolerability of sitagliptin. This was a randomized, double-blind, placebo-controlled, 3-period, single-dose crossover study. The study was conducted at 6 investigational sites. The study population consisted of 58 patients with type 2 diabetes who were not on antihyperglycemic agents. Interventions included sitagliptin 25 mg, sitagliptin 200 mg, or placebo. Measurements included plasma DPP-4 activity; post-OGTT glucose excursion; active and total incretin GIP levels; insulin, C-peptide, and glucagon concns.; and sitagliptin pharmacokinetics. Sitagliptin dose-dependently inhibited plasma DPP-4 activity over 24 h, enhanced active GLP-1 and GIP levels, increased insulin/C-peptide, decreased glucagon, and reduced glycemic excursion after OGTTs administered at 2 and 24 h after single oral 25- or 200-mg doses of sitagliptin. Sitagliptin was generally well tolerated, with no hypoglycemic events. In this study in patients with type 2 diabetes, near maximal glucose-lowering efficacy of sitagliptin after single oral doses was associated with inhibition of plasma DPP-4 activity of 80% or greater, corresponding to a plasma sitagliptin concentration of 100 nM or greater, and an augmentation of active GLP-1 and GIP levels of 2-fold or higher after an OGTT.  
 IT 486460-32-6, Sitagliptin  
 RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (sitagliptin on incretin and blood glucose levels in patients with type 2 diabetes)  
 RN 486460-32-6 CAPLUS  
 CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-  
 alpyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

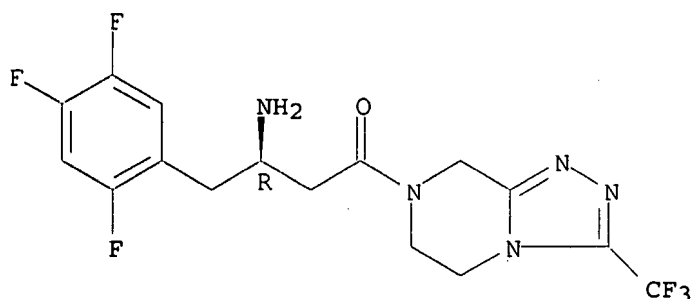
Absolute stereochemistry.



RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 19 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2006:1193860 CAPLUS  
DN 146:242978  
TI The incretin system: glucagon-like peptide-1 receptor agonists and dipeptidyl peptidase-4 inhibitors in type 2 diabetes  
AU Drucker, Daniel J.; Nauck, Michael A.  
CS Samuel Lunenfeld Research Institute, Mount Sinai Hospital, University of Toronto, Toronto, ON, Can.  
SO Lancet (2006), 368(9548), 1696-1705  
CODEN: LANCAO; ISSN: 0140-6736  
PB Elsevier Ltd.  
DT Journal; General Review  
LA English  
AB A review. Glucagon-like peptide 1 (GLP-1) is a gut-derived incretin hormone that stimulates insulin and suppresses glucagon secretion, inhibits gastric emptying, and reduces appetite and food intake. Therapeutic approaches for enhancing incretin action include degradation-resistant GLP-1 receptor agonists (incretin mimetics), and inhibitors of dipeptidyl peptidase-4 (DPP-4) activity (incretin enhancers). Clin. trials with the incretin mimetic exenatide (two injections per day or long-acting release form once weekly) and liraglutide (one injection per day) show redns. in fasting and postprandial glucose concns., and Hb A1c (HbA1c) (1-2%), associated with weight loss (2-5 kg). The most common adverse event associated with GLP-1 receptor agonists is mild nausea, which lessens over time. Orally administered DPP-4 inhibitors, such as sitagliptin and vildagliptin, reduce HbA1c by 0.5-1.0%, with few adverse events and no weight gain. These new classes of antidiabetic agents, and incretin mimetics and enhancers, also expand  $\beta$ -cell mass in preclin. studies. However, long-term clin. studies are needed to determine the benefits of targeting the incretin axis for the treatment of type 2 diabetes.  
IT 486460-32-6, Sitagliptin  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(use of glucagon-like peptide 1 receptor agonists and dipeptidyl peptidase inhibitor in treating patients with type 2 diabetes)  
RN 486460-32-6 CAPLUS  
CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-b]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 109 THERE ARE 109 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 20 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:1179059 CAPLUS

DN 146:55218

TI Efficacy and safety of the dipeptidyl peptidase-4 inhibitor sitagliptin as monotherapy in patients with type 2 diabetes mellitus

AU Raz, I.; Hanefeld, M.; Xu, L.; Caria, C.; Williams-Herman, D.; Khatami, H.

CS Diabetes Research Center, Hadassah University Hospital, Jerusalem, Israel

SO Diabetologia (2006), 49(11), 2564-2571

CODEN: DBTGAJ; ISSN: 0012-186X

PB Springer GmbH

DT Journal

LA English

AB Aims/hypothesis: The aim of this study was to assess the efficacy and safety of sitagliptin (MK-0431) as monotherapy in patients with type 2 diabetes mellitus and inadequate glycemic control (HbA1c  $\geq 7\%$  and  $\leq 10\%$ ) on exercise and diet. Methods: A total of 521 patients aged 27-76 years with a mean baseline HbA1c of 8.1% were randomized in a 1:2:2 ratio to treatment with placebo, sitagliptin 100 mg once daily, or sitagliptin 200 mg once daily, for 18 wk. The efficacy anal. was based on an all-patients-treated population using an anal. of covariance, excluding data obtained after glycemic rescue. Results: After 18 wk, HbA1c was significantly reduced with sitagliptin 100 mg and 200 mg compared with placebo (placebo-subtracted HbA1c reduction: -0.60% and -0.48%, resp.). Sitagliptin also significantly decreased fasting plasma glucose relative to placebo. Patients with higher baseline HbA1c ( $\geq 9\%$ ) experienced greater placebo-subtracted HbA1c redns. with sitagliptin (-1.20% for 100 mg and -1.04% for 200 mg) than those with HbA1c  $< 8\%$  (-0.44% and -0.33%, resp.) or  $\geq 8\%$  to 8.9% (-0.61% and -0.39%, resp.). Homeostasis model assessment beta cell function index and fasting proinsulin:insulin ratio, markers of insulin secretion and beta cell function, were significantly improved with sitagliptin. The incidence of hypoglycemia and gastrointestinal adverse experiences was not significantly different between sitagliptin and placebo. Sitagliptin had a neutral effect on body weight. Conclusions/interpretation: Sitagliptin significantly improved glycemic control and was well tolerated in patients with type 2 diabetes mellitus who had inadequate glycemic control on exercise and diet.

IT 486460-32-6, Sitagliptin

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL

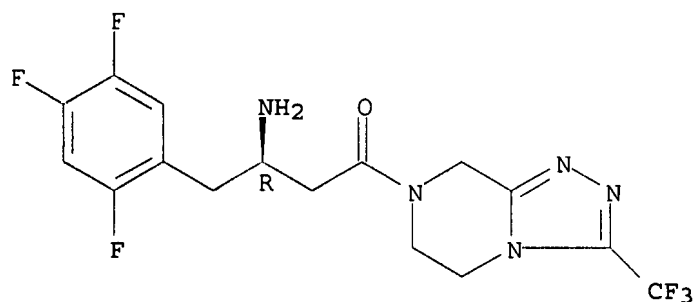
(Biological study); USES (Uses)

(sitagliptin was well tolerated and significantly improved glycemic control in patient with type 2 diabetes mellitus and inadequate glycemic control on exercise and diet)

RN 486460-32-6 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.



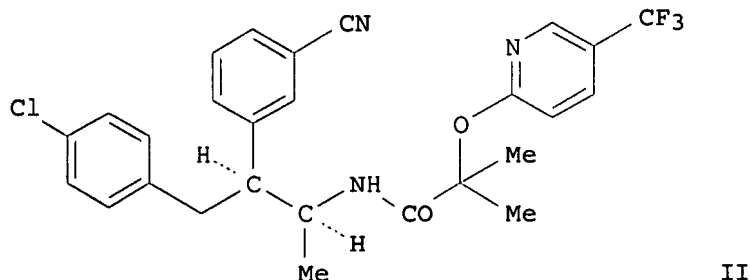
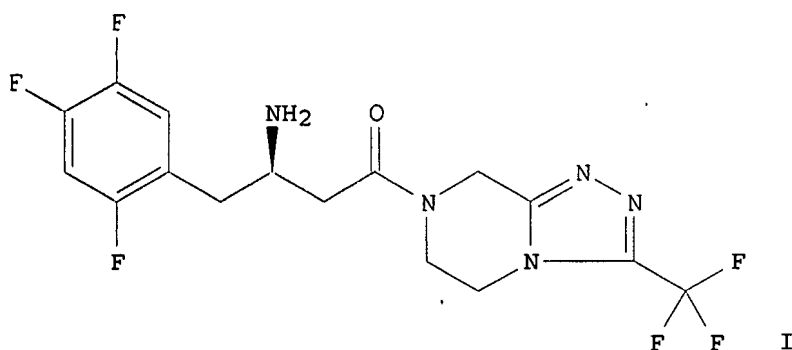
RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 21 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2006:1177439 CAPLUS  
DN 145:465736  
TI Combination of dipeptidyl peptidase-IV inhibitor and a cannabinoid CB1  
receptor antagonist for the treatment of diabetes and obesity  
IN Amatruda, John M.; Fong, Tung M.; Moller, David E.; Thornberry, Nancy A.  
PA Merck & Co., Inc., USA  
SO PCT Int. Appl., 54pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006119260	A2	20061109	WO 2006-US16754	20060428
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
PRAI US 2005-676783P	P	20050502		

GI





AB The present invention relates to pharmaceutical compns. comprising a combination of a particular dipeptidyl peptidase-IV (DPP-IV) inhibitor (e.g. (2R)-4-oxo-4-[3-(trifluoromethyl)-5,6-dihydro-[1,2,4]triazolo[4,3-a]pyrazin-7(8H)-yl]-1-(2,4,5-trifluorophenyl)butan-2-amine dihydrogen phosphate monohydrate; free base shown as I) and a particular cannabinoid CB1 receptor antagonist/inverse agonist (e.g. N-[(1S,2S)-3-(4-chlorophenyl)-2-(3-cyanophenyl)-1-methylpropyl]-2-methyl-2-[[5-(trifluoromethyl)pyridin-2-yl]oxy]propanamide; shown as II), kits containing such combinations and methods of using such compns. for the treatment of diabetes, diabetes associated with obesity, diabetes-related disorders, obesity, and obesity-related disorders (no data). Although the methods of preparation are not claimed, prepns. and/or characterization data for the above examples are included.

IT 486460-32-6P, (2R)-4-Oxo-4-[3-(trifluoromethyl)-5,6-dihydro-[1,2,4]triazolo[4,3-a]pyrazin-7(8H)-yl]-1-(2,4,5-trifluorophenyl)butan-2-amine

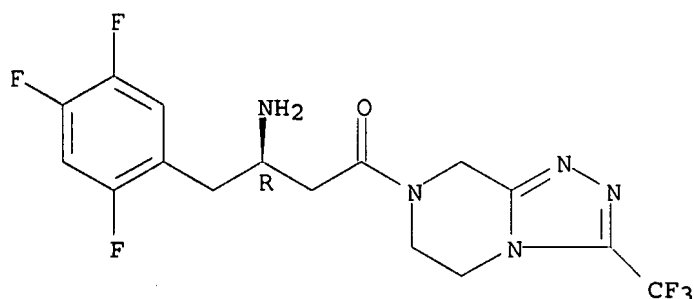
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(candidate codrug; combination of dipeptidyl peptidase-IV inhibitor and cannabinoid CB1 receptor antagonist for treatment of diabetes and obesity)

RN 486460-32-6 CAPLUS

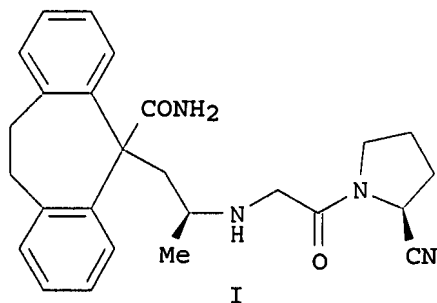
CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.



L3 ANSWER 22 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2006:1147258 CAPLUS  
 DN 145:471864  
 TI Preparation of multicyclic peptide derivatives as dipeptidyl peptidase-IV inhibitors  
 IN Kroth, Heiko; Feuerstein, Tim; Richter, Frank; Boer, Jurgen; Essers, Michael; Nolte, Bert; Schneider, Matthias; Hochguertel, Matthias; Frickel, Fritz-Frieder; Taveras, Arthur  
 PA Alantos Pharmaceuticals, Inc., USA  
 SO PCT Int. Appl., 542pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006116157	A2	20061102	WO 2006-US15200	20060421
	WO 2006116157	A9	20070301		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	US 2006270701	A1	20061130	US 2006-409481	20060421
PRAI	US 2005-674151P	P	20050422		
OS	CASREACT 145:471864; MARPAT 145:471864				
GI					



AB The invention relates generally to pyrrolidine and thiazolidine DPP-IV inhibitory compds. A-B-CO-D (A is a bicyclic or tricyclic ring system

attached to B at carbon or nitrogen; B is a linking group such as an amino acid residue or fragment; D is a pyrrolidine or thiazolidine residue or derivative), including isomers and pharmaceutically-acceptable salts, for treatment of DPP-IV mediated diseases, in particular, type-2 diabetes. Thus, pyrrolidinecarbonitrile derivative I was prepared by reaction of 5-[(S)-2-aminopropyl]-10,11-dihydro-5H-dibenzo[a,d]cycloheptene-5-carboxamide with N-glyoxyloyl-L-prolinecarbonitrile (preps. given) and showed  $K_i < 6$  nM for inhibition of DPP-IV.

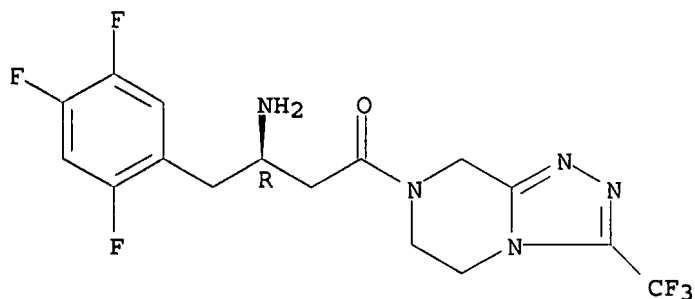
IT 486460-32-6, Sitagliptin

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(preparation of multicyclic peptide derivs. as dipeptidyl peptidase-IV inhibitors)

RN 486460-32-6 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-  
a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.



L3 ANSWER 23 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:952876 CAPLUS

DN 145:328380

TI Combination therapy for endothelial dysfunction, angina and diabetes

IN Kaesemeyer, Wayne

PA USA

SO U.S. Pat. Appl. Publ., 14pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2006205727	A1	20060914	US 2006-373658	20060310
	WO 2006099244	A1	20060921	WO 2006-US8801	20060310
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			

PRAI US 2005-660625P P 20050311

US 2005-675118P P 20050427

AB The combination of a HMG CoA reductase inhibitor like a statin, such as simvastatin, with a pFox inhibitor such as trimetazidine ("Simetazidine") is particularly advantageous for treatment of end-stage complications,

such as acute coronary syndrome (ACS) and chronic angina, especially in type II diabetics. The combination therapy is also useful in the treatment and/or prevention of chronic heart failure (CHF) and peripheral arterial disease (PAD). The combination of a nitric oxide (NO) mechanism with increased NO production with pFox inhibition simultaneously treats both the effect and the cause of angina. One or more oral hypoglycemic compds. (biguanides, insulin sensitizers, such as thiazolidinediones,  $\alpha$ -glucosidase inhibitors, insulin secretagogues, and dipeptidyl peptidase IV inhibitors), protein kinase C (PKC) inhibitors, and acetyl-CoA carboxylase inhibitors can also be used in combination with the HMG CoA reductase inhibitors and/or pFox inhibitors, especially in type II diabetics, to control glucose levels and treat endothelial dysfunction. The drugs can be given in combination (e.g. a single tablet) or in sep. dosage forms, administered simultaneously or sequentially. In the preferred form the statin is given in a dose of between 5 and 80 mg/day in two sep. doses, and the pFox inhibitor is administered in a sustained or extended dosage formulation at a dose of 20 mg three times a day or 35 mg two times a day. The dose of the oral hypoglycemic, PKC inhibitor, or acetyl-CoA carboxylase inhibitor varies with the type of drug used.

IT 654671-78-0, MK 431

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(combination therapy for endothelial dysfunction, angina and diabetes)

RN 654671-78-0 CAPLUS

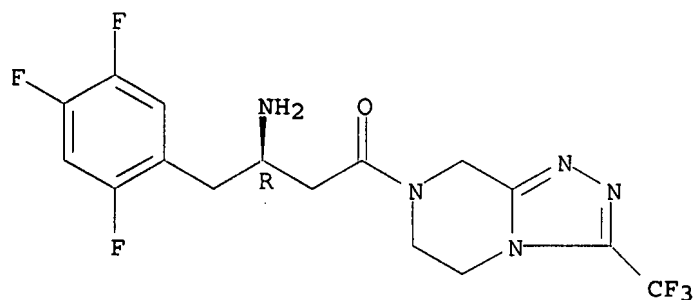
CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate (1:1) (CA INDEX NAME)

CM 1

CRN 486460-32-6

CMF C16 H15 F6 N5 O

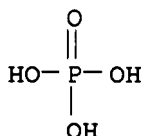
Absolute stereochemistry.



CM 2

CRN 7664-38-2

CMF H3 O4 P



DN 145:328394  
 TI Roflumilast for the treatment of diabetes mellitus  
 IN Kley, Hans-Peter; Hanauer, Guido; Hauser, Daniela; Schmidt, Beate;  
 Bredenbroeker, Dirk; Wurst, Wilhelm; Kemkowski, Joerg  
 PA Altana Pharma AG, Germany  
 SO PCT Int. Appl., 67pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006094942	A1	20060914	WO 2006-EP60445	20060303
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

PRAI EP 2005-101780 A 20050308

AB The invention discloses the use of Roflumilast and/or Roflumilast-N-Oxide for the treatment of diabetes mellitus and accompanying disorders thereof. The invention addnl. discloses combinations of Roflumilast and/or Roflumilast-N-Oxide with other active agents for the treatment of diabetes mellitus.

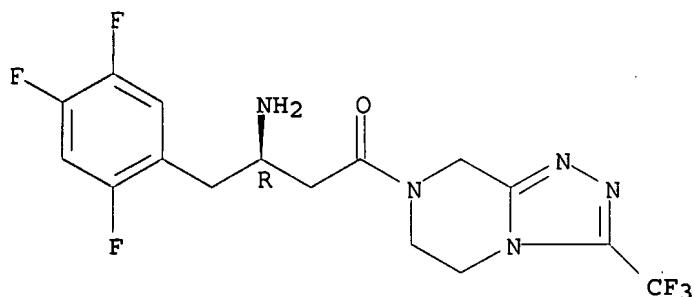
IT 486460-32-6

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (Roflumilast for treatment of diabetes mellitus and accompanying disorders, and combinations with other agents)

RN 486460-32-6 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-  
 alpyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.



L3 ANSWER 25 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:944442 CAPLUS

DN 145:328392

TI Roflumilast for the treatment of diabetes mellitus and accompanying disorders, and combinations with other agents

IN Kley, Hans-Peter; Hanauer, Guido; Hauser, Daniela; Schmidt, Beate;  
 Bredenbroeker, Dirk; Wurst, Wilhelm; Kemkowski, Joerg

PA Altana Pharma AG, Germany

SO PCT Int. Appl., 71pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006094933	A1	20060914	WO 2006-EP60418	20060303
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			

PRAI EP 2005-101772 A 20050308

AB The invention relates to the use of Roflumilast and/or Roflumilast-N-Oxide for the treatment of diabetes mellitus and accompanying disorders thereof. The invention addnl. relates to combinations of Roflumilast and/or Roflumilast-N-Oxide with other active agents for the treatment of diabetes mellitus.

IT 486460-32-6, SITAGLIPTIN

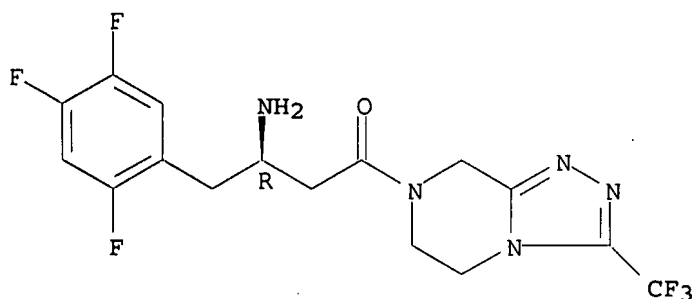
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(Roflumilast for treatment of diabetes mellitus and accompanying disorders, and combinations with other agents)

RN 486460-32-6 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.



L3 ANSWER 26 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:930335 CAPLUS

DN 146:330487

TI Inhibition of dipeptidyl-peptidase IV does not increase circulating IGF-1 concentrations in growing pigs

AU Faidley, T. D.; Leiting, B.; Pryor, K. D.; Lyons, K.; Hickey, G. J.; Thompson, D. R.

CS Department of Pharmacology, Merck Research Laboratories, Rahway, NJ, 07065, USA

SO Experimental Biology and Medicine (Maywood, NJ, United States) (2006), 231(8), 1373-1378

CODEN: EBMMBE; ISSN: 1535-3702

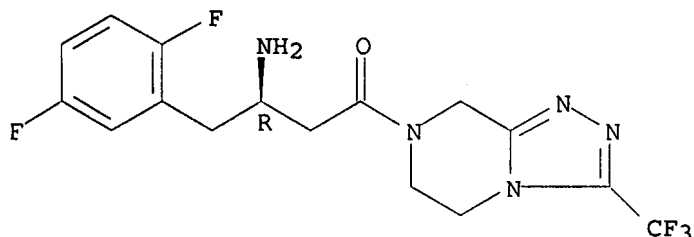
PB Society for Experimental Biology and Medicine

DT Journal  
 LA English  
 AB The enzyme dipeptidyl peptidase-IV (DPP-IV) inactivates a variety of bioactive peptides, including glucagon-like peptide-1 (GLP-1) and growth hormone releasing hormone (GHRH). Inhibiting DPP-IV to increase circulating GLP-1 is of interest as a treatment for Type II diabetes. Inactivation of DPP-IV may also increase circulating GHRH, potentially enhancing growth in domestic animals. To test the hypothesis that inhibition of DPP-IV activity will influence the growth hormone/IGF-1 axis, growing swine (*Sus scrofa domestica*, 78 kg) were treated with a DPP-IV inhibitor (Compound 1, the 2,5-difluorophenyl analog of the triazolopiperazine MK0431, sitagliptin), and blood plasma concns. of IGF-1 were monitored. Swine were administered either sterile saline (0.11 mL/kg followed by a continuous infusion at 2 mL/h for 72 h, controls, n = 2), Compound 1 (2.78 mg/kg followed by a continuous infusion at 0.327 mg/kg·hr for 72 h, n = 4) or GHRH (0.11 mL/kg sterile saline, followed by a continuous infusion of GHRH at 2.5 µg/kg·hr for 48 h, n = 4). Plasma concns. of Compound 1 were maintained at 1 µM, which resulted in a 90% inhibition of circulating DPP-IV activity. Relative to the predose 24-h period, area under the IGF-1 concentration curve (AUC) tended to be lower with Compound 1 (-79 ng/mL·hr) than controls (543 ng/mL·hr). GHRH treatment increased the IGF-1 AUC (1210 ng/mL·hr). We conclude that inhibition of DPP-IV does not alter the circulating levels of IGF-1 in the growing swine.

IT 486460-31-5  
 RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (inhibition of dipeptidyl-peptidase IV does not increase circulating IGF-1 concns. in growing swine)

RN 486460-31-5 CAPLUS  
 CN 1,2,4-Triazolo[4,3-a]pyrazine, 7-[(3R)-3-amino-4-(2,5-difluorophenyl)-1-oxobutyl]-5,6,7,8-tetrahydro-3-(trifluoromethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L3 ANSWER 27 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2006:903209 CAPLUS  
 DN 146:54398  
 TI Sitagliptin: a dipeptidyl peptidase IV inhibitor for the treatment of type 2 diabetes  
 AU Miller, Shannon A.; St. Onge, Erin L.  
 CS Pharmacotherapy Faculty, Florida Hospital Family Practice Residency, Orlando, FL, USA  
 SO Annals of Pharmacotherapy (2006), 40(7/8), 1336-1343  
 CODEN: APhRER; ISSN: 1060-0280  
 PB Harvey Whitney Books Co.  
 DT Journal; General Review  
 LA English  
 AB Objective: To review the pharmacol., pharmacokinetics, safety, and efficacy of sitagliptin, a dipeptidyl peptidase IV (DPP-IV) inhibitor in the management of type 2 diabetes mellitus. Data Sources: A MEDLINE

search (1966-Feb. 2006) was conducted for English-language articles using the terms dipeptidyl peptidase IV inhibitor, incretin, MK-0431, and sitagliptin. Abstrs. from the American Diabetes Association annual meetings in 2004 and 2005 were included as sources of data. Study Selection And Data Extraction: Articles pertaining to the pharmacol. of sitagliptin, its pharmacokinetics, safety and efficacy were reviewed. Data Synthesis: Sitagliptin is a potent, competitive, reversible inhibitor of the DPP-IV enzyme. It is eliminated renally, with a terminal half-life of 11.8-14.4 h. In Phase II clin. trials, sitagliptin was found to be superior to placebo for the treatment of type 2 diabetes mellitus. Results of a small trial comparing sitagliptin with glipizide indicate that both treatments are comparable. The efficacy of sitagliptin has also been demonstrated when used as adjunctive therapy with metformin. Few adverse effects have been reported. Weight gain and hypoglycemia have not been seen with sitagliptin therapy. Conclusions: Based on its unique mechanism of action, sitagliptin will provide practitioners with an addnl. tool in the treatment of diabetes. Review of the literature to date implies sitagliptin may be effective as monotherapy in type 2 diabetes. In addition, existing evidence supports the use of sitagliptin as adjunct therapy to sulfonylureas and metformin. Another advantage of sitagliptin use is that it appears to be free from the adverse effects of weight gain and hypoglycemia that are associated with currently available treatments.

IT 486460-32-6, Sitaglipt

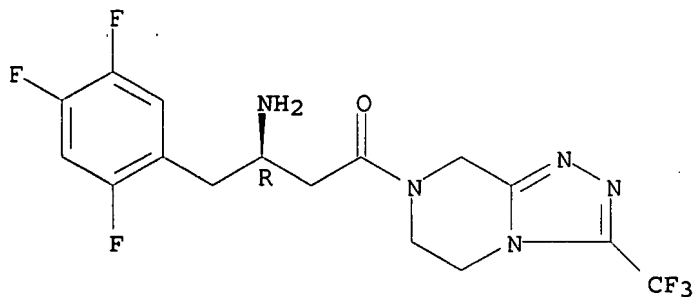
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(sitagliptin as monotherapy and as adjunct therapy with sulfonylurea and metformin was effective without any adverse effects of weight gain and hypoglycemia in type 2 diabetes mellitus patient)

RN 486460-32-6 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.



L3 ANSWER 28 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:826044 CAPLUS

DN 146:176805

TI Pharmacokinetics and pharmacodynamic effects of the oral DPP-4 inhibitor sitagliptin in middle-aged obese subjects

AU Herman, Gary A.; Bergman, Arthur; Liu, Fang; Stevens, Cathy; Wang, Amy Q.; Zeng, Wei; Chen, Li; Snyder, Karen; Hilliard, Deborah; Tanen, Michael; Tanaka, Wesley; Meehan, Alan G.; Lasseter, Kenneth; Dilzer, Stacy; Blum, Robert; Wagner, John A.

CS Merck Research Laboratories, Rahway, NJ, USA

SO Journal of Clinical Pharmacology (2006), 46(8), 876-886

CODEN: JPCPBR; ISSN: 0091-2700

PB Sage Publications

DT Journal

LA English



AB Sitagliptin (MK-0431) is an oral, potent, and selective dipeptidyl peptidase-IV (DPP-4) inhibitor developed for the treatment of type 2 diabetes. This multicenter, randomized, double-blind, placebo-controlled study examined the pharmacokinetic and pharmacodynamic effects of sitagliptin in obese subjects. Middle-aged (45-63 years), nondiabetic, obese (body mass index: 30-40 kg/m<sup>2</sup>) men and women were randomized to sitagliptin 200 mg bid (n = 24) or placebo (n = 8) for 28 days. Steady-state plasma concns. of sitagliptin were achieved within 2 days of starting treatment, and >90% of the dose was excreted unchanged in urine. Sitagliptin treatment led to .apprx.90% inhibition of plasma DPP-4 activity, increased active glucagon-like peptide-1 (GLP-1) levels by 2.7-fold (P <.001), and decreased post-oral glucose tolerance test glucose excursion by 35% (P <.050) compared to placebo. In non-diabetic obese subjects, treatment with sitagliptin 200 mg bid was generally well tolerated without associated hypoglycemia and led to maximal inhibition of plasma DPP-4 activity, increased active GLP-1, and reduced glycemic excursion.

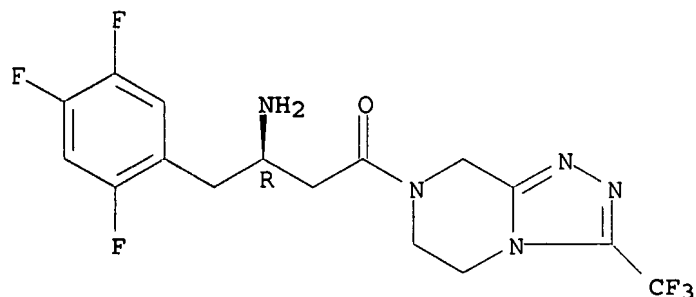
IT 486460-32-6, Sitagliptin  
 RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(sitagliptin inhibits of plasma dipeptidyl peptidase-IV activity, increased active glucagon-like peptide-1 levels and decreased glucose excursion in middle-aged obese patient with diabetes)

RN 486460-32-6 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.



L3 ANSWER 29 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:795736 CAPLUS

DN 145:230633

TI Preparation of 4-[(benzimidazolyl/pyrazolyl/triazolyl)methoxy]phenoxyacetic acids as PPAR modulators

IN Cow, Christopher; Epple, Robert; Wang, Xing; Xie, Yongping

PA Irm LLC, Bermuda

SO PCT Int. Appl., 62pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006084176	A2	20060810	WO 2006-US3924	20060203
	WO 2006084176	A3	<del>20060914</del>		

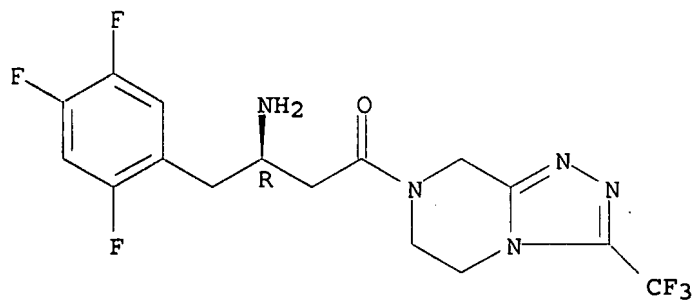
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,

CM 1

CRN 486460-32-6

CMF. C16 H15 F6 N5 O

Absolute stereochemistry.



L3 ~~ANSWER 30 OF 80~~ CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:768357 CAPLUS

DN 145:189177

TI Process for the preparation of chiral  $\beta$ -amino acid derivatives by asymmetric hydrogenation of enamino esters and amides using transition metal-complexed chiral ferrocenyldiphosphines

IN Xiao, Yi; Armstrong, Joseph D., III; Krska, Shane W.; Njolito, Eugenia; Rivera, Nelo R.; Sun, Yongkui; Rosner, Thorsten; Clausen, Andrew M.

PA Merck & Co., Inc., USA

SO PCT Int. Appl., 27pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006081151	A1	20060803	WO 2006-US2147	20060120
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

PRAI US 2005-646697P P ~~20050124~~

OS MARPAT 145:189177

AB The invention relates to a process for the efficient preparation of enantiomerically enriched  $\beta$ -amino acid derivs.  $R_1CH(NH_2)CH_2CO-Z$  [ $Z = OR_2, SR_2, NR_2R_3$ ;  $R_1 =$  alkyl, aryl, heteroaryl, aralkyl, heteroaralkyl;  $R_2, R_3 = H, alkyl, aryl, aralkyl$ ;  $R_2R_3N =$  (substituted) 4-7 membered ring] having (R)- or (S)-configuration which are useful in the asym. synthesis of biol. active mols. The process comprises an enantioselective hydrogenation of a prochiral  $\beta$ -aminoacrylic acid derivative in the presence of an ammonium salt and a transition metal precursor complexed with a chiral ferrocenyl diphosphine ligand. Thus, (Z)-4-oxo-4-[3-(trifluoromethyl)-5,6-dihydro-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-1-(2,4,5-trifluorophenyl)but-2-en-2-amine (preparation given) was hydrogenated in the presence of chloro(1,5-cyclooctadiene)rhodium(I) dimer, (R,S) tert-Bu Josiphos, and ammonium chloride in MeOH at 100 psi and 50 °C for 18 h to give 97% (R)-4-oxo-4-[3-(trifluoromethyl)-5,6-dihydro-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-1-(2,4,5-trifluorophenyl)butan-2-amine in 98-99% enantiomeric excess.

IT 486460-31-5P 486460-32-6

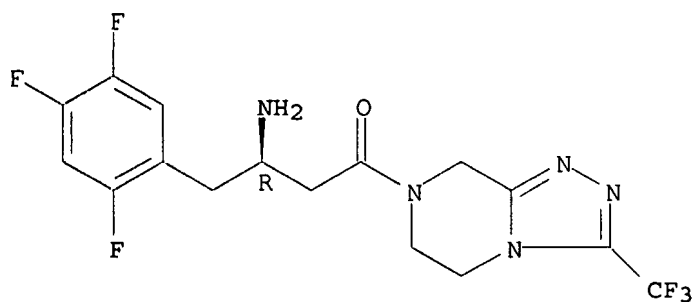
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(preparation of chiral  $\beta$ -amino acid derivs. by asym. hydrogenation of enamino esters and amides using transition metal-complexed chiral ferrocenyldiphosphines)

RN 486460-31-5 CAPLUS

CN 1,2,4-Triazolo[4,3-a]pyrazine, 7-[(3R)-3-amino-4-(2,5-difluorophenyl)-1-oxobutyl]-5,6,7,8-tetrahydro-3-(trifluoromethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L3 ~~ANSWER 32 OF 80~~ CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2006:733033 CAPLUS  
 DN 145:174316  
 TI Direct compression formulation comprising dipeptidylpeptidase IV inhibitor  
 IN Pfeffer, Sabine; Schaefer, Frank; Schneeberger, Ricardo; Sutton, Paul  
 Allen; Trueby, Martin Friedrich; Wirth, Wolfgang  
 PA Novartis A.-G., Switz.; Novartis Pharma G.m.b.H.  
 SO PCT Int. Appl., 100 pp.  
 CODEN: PIXXD2

DT Patent  
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006078593	A2	20060727	WO 2006-US1473	20060117
	WO 2006078593	A3	20060914		
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	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	US 2006210627	A1	20060921	US 2006-333582	20060117
PRAI	US 2005-644645P	P	<del>20050118</del>		
	US 2005-690484P	P	20050614		

AB This invention relates to tablets especially tablets formed by direct compression of a dipeptidylpeptidase IV (DPP-IV) inhibitor compound, a process for the preparation thereof, to new pharmaceutical formulations, and new tableting powders comprising DPP-IV inhibitor formulations capable of being directly compressed into tablets. The invention relates further to a process for preparing the tablets by blending the active ingredient and specific excipients into the new formulations and then directly compressing the formulations into the direct compression tablets. The invention also relates to vildagliptin particle size distribution and a new crystal form of vildagliptin particularly adapted for the preparation of improved tablets and other pharmaceutical compns. For example, tablets were produced containing LAF237 100 mg, microcryst. cellulose 191,36 mg, lactose anhydrous 95.64 mg, sodium starch glycolate 8 mg and magnesium stearate 5 mg.

IT 654671-78-0, MK-0431

RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

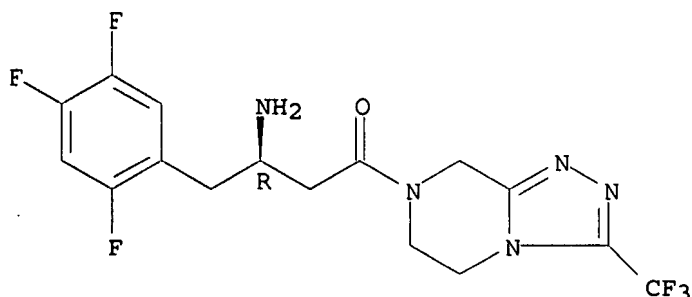
(direct compression formulation comprising dipeptidylpeptidase IV inhibitor)

RN 654671-78-0 CAPLUS  
CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate (1:1)  
(CA INDEX NAME)

CM 1

CRN 486460-32-6  
CMF C16 H15 F6 N5 O

Absolute stereochemistry.



L3 ~~ANSWER 33-OF 80~~ CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:681434 CAPLUS

DN 145:137853

TI Pharmaceutical compositions and methods using a biological response modifier and a  $\beta$ -cell growth factor for restoring  $\beta$ -cell mass and function

IN Nadler, Jerry

PA Diakine Therapeutics, Inc., USA

SO PCT Int. Appl., 121 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

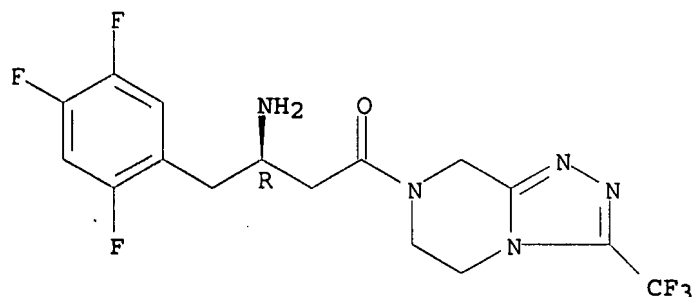
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006074051	A2	20060713	WO 2005-US47390	20051230
	WO 2006074051	A3	20061109		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	US 2006160736	A1	20060720	US 2005-321090	20051230
PRAI	US 2004-640523P	P	<del>20041230</del>		

OS MARPAT 145:137853

AB Pharmaceutical compns. and methods for using are provided for restoring  $\beta$ -cell mass and function in a mammal in need thereof. The pharmaceutical compns. have a biol. response modifier and a  $\beta$ -cell growth factor in admixt. with a pharmaceutically acceptable carrier, adjuvant or vehicle. The compns. of the invention may be used to treat diabetes.

IT 486460-32-6, Sitagliptin  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)  
 (biol. response modifier and  $\beta$ -cell growth factor for restoring  
 $\beta$ -cell mass and function)  
 RN 486460-32-6 CAPLUS  
 CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-  
 a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.



L3 ~~ANSWER 34 OF 80~~ CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2006:677805 CAPLUS  
 DN 145:137850  
 TI Combination therapy for diabetes and related disorders using a GPR119  
 agonist and dipeptidyl peptidase IV inhibitor for lowering blood glucose  
 and increasing GLP-1 levels  
 IN Chu, Zhi-Liang; Leonard, James N.; Al-Shamma, Hussien A.; Jones, Robert M.  
 PA USA  
 SO U.S. Pat. Appl. Publ., 99 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2006154866	A1	20060713	US 2006-328405	20060109
	WO 2006076231	A2	20060720	WO 2006-US510	20060109
	WO 2006076231	A8	20060921		
	WO 2006076231	A3	20070118		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
EP	1758565	A2	20070307	EP 2006-717678	20060109
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU				
	US 2007072803	A1	20070329	US 2006-603410	20061122
	US 2007072804	A1	20070329	US 2006-603417	20061122
PRAI	US 2005-643086P	P	<del>20050110</del>		
	US 2005-683172P	P	20050519		

US 2005-726880P P 20051014

US 2006-328405 A1 20060109

WO 2006-US510 W 20060109

AB The present invention provides combination of a G protein-coupled receptor GPR119 agonist with a dipeptidyl peptidase IV (DPP-IV) inhibitor such that the combination provides an effect in lowering a blood glucose level or in increasing a blood GLP-1 level in a subject for treating or preventing diabetes

to the use of a G protein-coupled receptor to screen for GLP-1 secretagogues. GPR119 agonist is AR231453 while DPP-IV inhibitors of the invention include MK-0431, LAF237 and FE107542.

IT 654671-78-0

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(DPP-IV inhibitor; combination therapy for diabetes and related disorders using GPR119 agonist and dipeptidyl peptidase IV inhibitor for lowering blood glucose and increasing GLP-1 levels)

RN 654671-78-0 CAPLUS

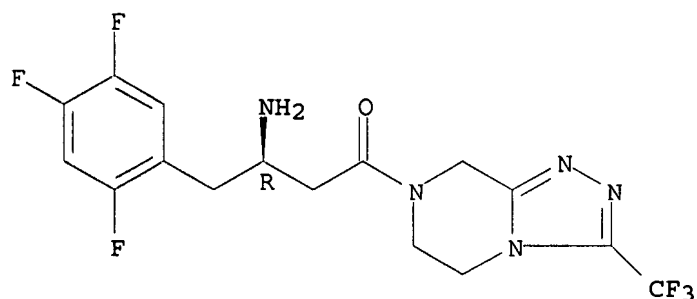
CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-*a*]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate (1:1) (CA INDEX NAME)

CM 1

CRN 486460-32-6

CMF C16 H15 F6 N5 O

Absolute stereochemistry.



L3 ~~ANSWER 35 OF 80~~ CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:639624 CAPLUS

DN 145:465116

TI Pharmacokinetic and pharmacodynamic properties of multiple oral doses of sitagliptin, a dipeptidyl peptidase-IV inhibitor: a double-blind, randomized, placebo-controlled study in healthy male volunteers

AU Bergman, Arthur J.; Stevens, Catherine; Zhou, YanYan; Yi, Bingming; Laethem, Martine; De Smet, Marina; Snyder, Karen; Hilliard, Deborah; Tanaka, Wesley; Zeng, Wei; Tanen, Michael; Wang, Amy Q.; Chen, Li; Winchell, Gregory; Davies, Michael J.; Ramael, Steven; Wagner, John A.; Herman, Gary A.

CS Merck & Co., Inc., Whitehouse Station, NJ, USA

SO Clinical Therapeutics (2006), 28(1), 55-72

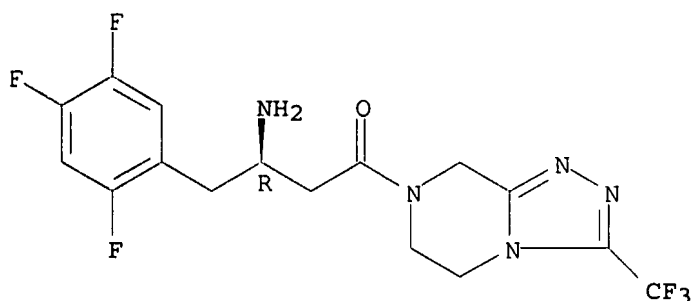
CODEN: CLTHDG; ISSN: 0149-2918

PB Excerpta Medica, Inc.

DT Journal

LA English

AB Background: Dipeptidyl peptidase-IV (DPP-IV) inhibitors represent a new class of oral antihyperglycemic agents. Sitagliptin is an orally active and selective DPP-IV inhibitor currently in Phase III development for the treatment of type 2 diabetes mellitus. Objective: The aim of this study



L3 ~~ANSWER 36 OF 80~~ CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:559882 CAPLUS

DN 145:284727

TI Chronic inhibition of dipeptidyl peptidase-4 with a sitagliptin analog preserves pancreatic  $\beta$ -cell mass and function in a rodent model of type 2 diabetes

AU Mu, James; Woods, John; Zhou, Yun-Ping; Roy, Ranabir Sinha; Li, Zhihua; Zycband, Emanuel; Feng, Yue; Zhu, Lan; Li, Cai; Howard, Andrew D.; Moller, David E.; Thornberry, Nancy A.; Zhang, Bei B.

CS Department of Metabolic Disorders, Merck Research Laboratories, Rahway, NJ, USA

SO Diabetes (2006) 55(6), 1695-1704

CODEN: DIAEAZ; ISSN: 0012-1797

PB American Diabetes Association

DT Journal

LA English

AB Inhibitors of dipeptidyl peptidase-4 (DPP-4), a key regulator of the actions of incretin hormones, exert antihyperglycemic effects in type 2 diabetic patients. A major unanswered question concerns the potential ability of DPP-4 inhibition to have beneficial disease-modifying effects, specifically to attenuate loss of pancreatic  $\beta$ -cell mass and function. Here, we investigated the effects of a potent and selective DPP-4 inhibitor, an analog of sitagliptin (des-fluoro-sitagliptin), on glycemic control and pancreatic  $\beta$ -cell mass and function in a mouse model with defects in insulin sensitivity and secretion, namely high-fat diet (HFD) streptozotocin (STZ)-induced diabetic mice. Significant and dose-dependent correction of postprandial and fasting hyperglycemia, HbA<sub>1c</sub>, and blood plasma triglyceride and free fatty acid levels were observed in HFD/STZ mice following 2-3 mo of chronic therapy. Treatment with des-fluoro-sitagliptin dose dependently increased the number of insulin-positive  $\beta$ -cells in islets, leading to the normalization of  $\beta$ -cell mass and  $\beta$ -cell-to- $\alpha$ -cell ratio. In addition, treatment of mice with des-fluoro-sitagliptin, but not glipizide, significantly increased islet insulin content and improved glucose-stimulated insulin secretion in isolated islets. These findings suggest that DPP-4 inhibitors may offer long-lasting efficacy in the treatment of type 2 diabetes by modifying the courses of the disease.

IT 837430-23-6

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(dipeptidyl peptidase-4 inhibition and pancreatic  $\beta$ -cell mass and function)

RN 837430-23-6 CAPLUS

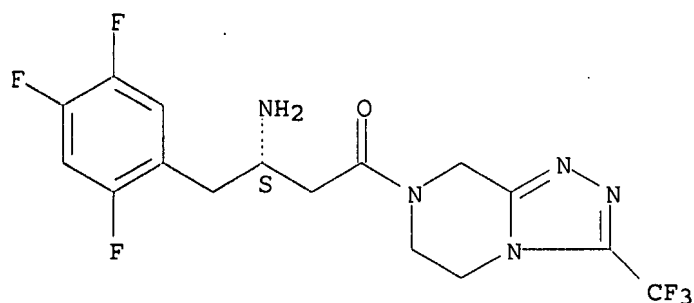
CN 1,2,4-Triazolo[4,3-a]pyrazine, 7-[(3R)-3-amino-4-(2,5-difluorophenyl)-1-oxobutyl]-5,6,7,8-tetrahydro-3-(trifluoromethyl)-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 486460-31-5

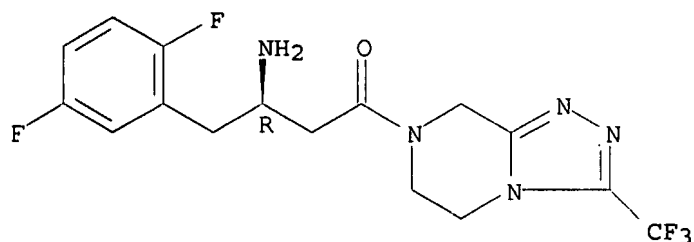
CMF C16 H16 F5 N5 O





L3 ~~ANSWER 38 OF 180~~ CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2006:456711 CAPLUS  
 DN 145:116704  
 TI Discovery, Structure-Activity Relationship, and Pharmacological Evaluation  
 of (5-Substituted-pyrrolidinyl-2-carbonyl)-2-cyanopyrrolidines as Potent  
 Dipeptidyl Peptidase IV Inhibitors  
 AU Pei, Zhonghua; Li, Xiaofeng; Longenecker, Kenton; Von Geldern, Thomas W.;  
 Wiedeman, Paul E.; Lubben, Thomas H.; Zinker, Bradley A.; Stewart, Kent;  
 Ballaron, Stephen J.; Stashko, Michael A.; Mika, Amanda K.; Beno, David W.  
 A.; Long, Michelle; Wells, Heidi; Kempf-Grote, Anita J.; Madar, David J.;  
 McDermott, Todd S.; Bhagavatula, Lakshmi; Fickes, Michael G.; Pireh,  
 Daisy; Solomon, Larry R.; Lake, Marc R.; Edalji, Rohinton; Fry, Elizabeth  
 H.; Sham, Hing L.; Trevillyan, James M.  
 CS Metabolic Disease Research, Advanced Technology, Departments of  
 Exploratory Pharmacokinetics and Pharmaceutics and Process Chemistry  
 Global Pharmaceutical Research and Development, Abbott Laboratories,  
 Abbott Park, IL, 60064-3500, USA  
 SO Journal of Medicinal Chemistry (2006) 49(12), 3520-3535  
 CODEN: JMCMAR; ISSN: 0022-2623  
 PB American Chemical Society  
 DT Journal  
 LA English  
 B A series of (5-substituted pyrrolidinyl-2-carbonyl)-2-cyanopyrrolidine  
 (C5-Pro-Pro) analogs was discovered as dipeptidyl peptidase IV (DPP-IV)  
 inhibitors as a potential treatment of diabetes and obesity. X-ray  
 crystallog. data show that these inhibitors bind to the catalytic site of  
 DPP-IV with the cyano group forming a covalent bond with the serine residue  
 of DPP-IV. The C5-substituents make various interactions with the enzyme  
 and affect potency, chem. stability, selectivity, and PK properties of the  
 inhibitors. Optimized analogs are extremely potent with subnanomolar  
 Ki's, are chem. stable, show very little potency decrease in the presence  
 of plasma, and exhibit more than 1,000-fold selectivity against related  
 peptidases. The best compds. also possess good PK and are efficacious in  
 lowering blood glucose in an oral glucose tolerance test in ZDF rats.  
 IT 654671-78-0, MK 0431  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)  
 (Discovery, Structure-Activity Relationship, and Pharmacol. Evaluation  
 of (5-Substituted-pyrrolidinyl-2-carbonyl)-2-cyanopyrrolidines as  
 Potent Dipeptidyl)  
 RN 654671-78-0 CAPLUS  
 CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-  
 a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate (1:1)  
 (CA INDEX NAME)  
 CM 1  
 CRN 486460-32-6  
 CMF C16 H15 F6 N5 O

Absolute stereochemistry.

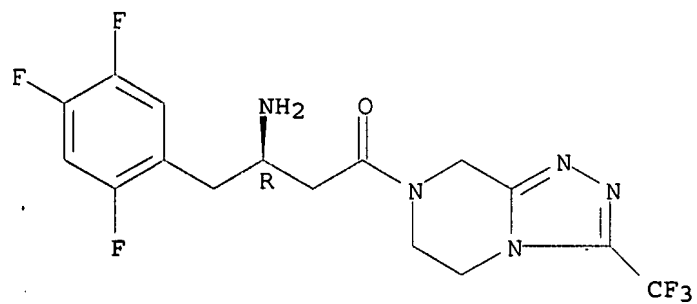


**ANSWER 37 OF 80** CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:479718 CAPLUS  
DN 145:145648  
TI Identification of Ammonium Chloride as an Effective Promoter of the Asymmetric Hydrogenation of a  $\beta$ -Enamine Amide  
AU Clausen, Andrew M.; Dziadul, Brianne; Cappuccio, Kristine L.; Kaba, Mahmoud; Starbuck, Cindy; Hsiao, Yi; Dowling, Thomas M.  
CS Process Research Development (Process Research), Merck & Co., Inc., Rahway, NJ, 07065, USA  
SO Organic Process Research & Development **(2006)**, 10(4), 723-726  
CODEN: OPRDFK; ISSN: 1083-6160  
PB American Chemical Society  
DT Journal  
LA English  
OS CASREACT 145:145648  
AB An investigation into the cause of substrate-specific hydrogenation performance variability was conducted. A significant and unexpected correlation was observed between apparent pH of a solution of the substrate and rate of conversion and enantioselectivity. This observation led to the examination of low and variable levels of native ammonium chloride in different lots of substrate. The presence of ammonium chloride was found to have a pos. effect on reaction rate and enantioselectivity when controlled within a relatively narrow range. Optimal performance was achieved with a mole ratio of 1:1 ammonium chloride to catalyst. The enamine amide, 7-[3-amino-1-oxo-4-(2,4,5-trifluorophenyl)-2-butenyl]-5,6,7,8-tetrahydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazine, was converted to stigmatistin.  
IT 823817-55-6P, (S)-Sitagliptin 898543-70-9P  
RL: BYP (Byproduct); PREP (Preparation)  
(ammonium chloride as effective promoter of substrate-specific, stereoselective hydrogenation of stigmatistin precursor  
[amino(oxo)(trifluorophenyl)butenyl]tetrahydro(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazine)  
RN 823817-55-6 CAPLUS  
N 1,2,4-Triazolo[4,3-a]pyrazine, 7-[(3S)-3-amino-1-oxo-4-(2,4,5-trifluorophenyl)butyl]-5,6,7,8-tetrahydro-3-(trifluoromethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Absolute stereochemistry.



L3 ANSWER 39 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:411999 CAPLUS

DN 144:456512

TI Combination of DPP-IV inhibitor, PPAR antidiabetic and metformin

IN Burkey, Bryan; Hughes, Thomas Edward

PA Novartis A.-G., Switz.; Novartis Pharma GmbH

SO PCT Int. Appl., 51 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006047248	A1	20060504	WO 2005-US37819	20051021
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

PRAI US 2004-621891P P 20041025

OS MARPAT 144:456512

AB The invention relates to a combination, such as a combined preparation or pharmaceutical composition comprising (1) a dipeptidyl peptidase IV (DPP-IV) inhibitor, (2) one antidiabetic selected from thiazolidinediones (glitazones), non-glitazone type PPAR agonists, PPAR $\alpha$  agonists or dual PPAR $\gamma$ /PPAR $\alpha$  agonists, and (3) metformin, for simultaneous, sep. or sequential use, especially in the prevention, delay of progression or treatment of conditions mediated by DPP-IV, in particular diabetes, more particularly type 2 diabetes mellitus, conditions of impaired glucose tolerance (IGT), conditions of impaired fasting plasma glucose, metabolic acidosis, ketosis, arthritis, obesity and osteoporosis. The invention also relates to the use of such combination for the preparation of a pharmaceutical preparation for the prevention, delay of progression or treatment of such conditions and for the cosmetic treatment of a mammal in order to effect a cosmetically beneficial loss of body weight; to a method of prevention, delay of progression or treatment of conditions mediated by DPP-IV; and to a method of improving the bodily appearance of a warm-blooded animal. For example, bilayered tablets comprising metformin 500 mg in one layer and the DPP-IV inhibitor 50 mg plus pioglitazone HCl 39.672 (equivalent to 30 mg pioglitazone) in another layer were prepared

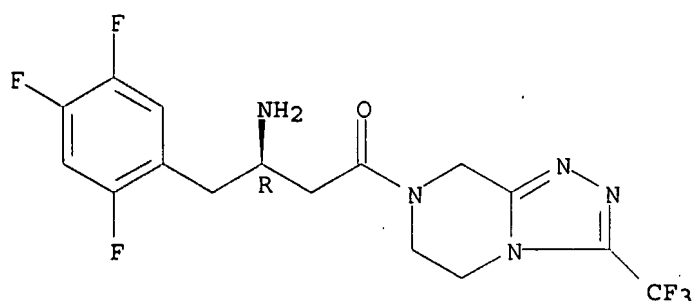
IT 486460-32-6 654671-78-0, MK-0431

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(combination of DPP-IV inhibitor, PPAR agonist and metformin for treatment of metabolic disorders)

RN 486460-32-6 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.



L3 ~~ANSWER 40 OF 80~~ CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2006:404434 CAPLUS  
 DN 145:55290  
 TI Determination of MK-0431 in human plasma using high turbulence liquid chromatography online extraction and tandem mass spectrometry  
 AU Zeng, Wei; Musson, Donald G.; Fisher, Alison L.; Wang, Amy Qiu  
 CS Department of Drug Metabolism, Merck Research Laboratories, Merck and Co. Inc., West Point, PA, 19486-0004, USA  
 SO Rapid Communications in Mass Spectrometry (2006) 20(8), 1169-1175  
 CODEN: RCMSEF; ISSN: 0951-4198  
 PB John Wiley & Sons Ltd.  
 DT Journal  
 LA English  
 AB A robust and sensitive method using high turbulence liquid chromatog. (HTLC) online extraction with tandem mass spectrometry (MS/MS) for the determination of MK-0431 in human plasma was developed and validated to support the clin. studies. This HTLC online extraction method eliminated the time-consuming off-line sample extraction procedures and significantly increased productivity. A narrow bore large particle size reversed-phase column (Cyclone, 50 + 1.0 mm, 60 µm) and a BDS Hypersil C18 column (30 + 2.1 mm, 3 µm) were used as extraction and anal. columns, resp. The linear dynamic range of the calibration curve was 0.5 to 1000 ng/mL. Intraday validation was conducted using five calibration curves prepared in five lots of human control plasma, and the intraday precision (RSD%) was from 2.4 to 9.0% and the accuracy was from 98.0 to 103% of the nominal value. The intraday precision (RSD%, n = 5) for plasma quality control (QC) samples varied from 2.0 to 5.3% and accuracy from 103 to 105% of the nominal value. The interday precision (RSD%) for 100 sets of plasma QC samples in 29 anal. runs varied from 6.3 to 9.0% and the accuracy from 98.8 to 104% of the nominal value. No significant difference was observed between the interday and intraday precision and accuracy of the QC samples.  
 IT 654671-78-0, MK-0431  
 RL: ANT (Analyte); ANST (Analytical study)  
 (determination of MK-0431 in human plasma using high turbulence liquid chromatog. online extraction and tandem mass spectrometry)  
 RN 654671-78-0 CAPLUS  
 CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate (1:1) (CA INDEX NAME)  
 L3 ~~ANSWER 41 OF 80~~ CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2006:364868 CAPLUS  
 DN 144:382039  
 TI Combination of a DPP-IV inhibitor and a PDGF kinase inhibitor  
 IN Burkey, Bryan; Hughes, Thomas Edward  
 PA Novartis A.-G., Switz.; Novartis Pharma G.m.b.H.  
 SO PCT Int. Appl., 41 pp.  
 CODEN: PIXXD2

DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006041976	A1	20060420	WO 2005-US35917	20051006
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

PRAI US 2004-617201P P 20041006

The present invention relates to a combination, such as a combined prepn. or pharmaceutical compn., resp., comprising (i) dipeptidyl peptidase (DPP) IV inhibitor or a pharmaceutically acceptable salt thereof, and (ii) at least one PDGF receptor tyrosine kinase inhibitor or a pharmaceutically acceptable salt thereof. The present invention furthermore relates to the use of such a combination for the prevention, delay of progression or treatment of a disease or condition selected from insulin resistance, impaired glucose metab. (IGT), conditions of impaired glucose tolerance, conditions of impaired fasting plasma glucose, diabetes particularly type 1 or type 2 diabetes mellitus, obesity, diabetic retinopathy, macular degeneration, cataracts, diabetic nephropathy, glomerulosclerosis, diabetic neuropathy, erectile dysfunction, premenstrual syndrome, coronary heart disease, hypertension, angina pectoris, myocardial infarction, stroke, vascular restenosis, skin and connective tissue disorders, foot ulcerations and ulcerative colitis, endothelial dysfunction and impaired vascular compliance, and vascular events, cardiovascular morbidity or mortality assocd. with diabetes (e.g. type I or II) or IGT. For example, a combination comprises a PDGF receptor kinase inhibitor, i.e., [4-(4-methylpiperazin-1-yl-methyl)-N-[4-methyl-3-(4-pyridin-3-yl)pyrimidin-2-yl-amino]phenyl]benzamide or 4-methyl-N-[3-(4-methylimidazol-1-yl)-5-trifluoromethylphenyl]-3-(4-pyridin-3-yl-pyrimidin-2-yl-amino)benzamide (50, 100, 200, 300 or 400 mg) or a pharmaceutically acceptable salt thereof, and a DPP-IV inhibitor (S)-1-[(3-hydroxy-1-adamantyl)amino]acetyl-2-cyanopyrrolidine (50, 100 or 150 mg) or a pharmaceutically acceptable salt thereof.

IT 486460-32-6, Sitagliptin 654671-78-0, MK-0431

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(therapeutic uses of combination of DPP-IV inhibitor and PDGF kinase inhibitor)

RN 486460-32-6 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.

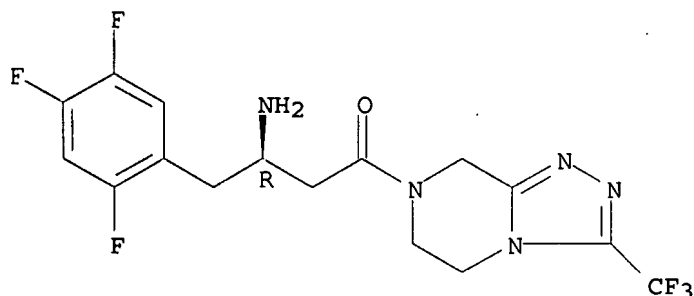
AB The acyclic hydrazides I [R1 = H, C1-4-alkyl, C3-6-cycloalkyl, C2-4-alkenyl, C2-4-alkynyl; R2 = C1-10-alkyl, C2-10-alkenyl, C2-10-alkynyl, C3-10-cycloalkyl, (C3-10-cycloalkyl)-(C1-4-alkyl), cycloheteroalkyl, cycloheteroalkyl-(C1-4-alkyl), aryl, aryl-(C1-10-alkyl), aryl-(C2-8-alkenyl), diaryl-(C1-4-alkyl), heteroaryl, heteroaryl-(C1-10-alkyl), NRcRd; Ar1, Ar2 = aryl, heteroaryl; Rc, Rd = H, C1-10-alkyl, C2-10-alkenyl, cycloalkyl, cycloalkyl-(C1-10-alkyl), aryl, heteroaryl, pyridyl, pyrimidinyl, aryl-(C1-10-alkyl), heteroaryl-(C1-10-alkyl); NRcRd = 4- to 7-membered heterocyclic ring containing 0 - 2 addnl. heteroatoms selected from N, O, S] of the invention are antagonists and/or inverse agonists of the Cannabinoid-1 (CB1) receptor and are useful in the treatment, prevention and suppression of diseases mediated by the CB1 receptor. Thus, hydrazide II was prepared from 3-ClC6H4CHO via imination with MeNH2, Grignard reaction with 4-ClC6H4CH2MgCl, nitrosation with NaNO3 in CH2Cl2 containing N-chlorosuccinimide and PhCH2Et3N+Cl-, reduction with TiCl4/Mg in Et2O, and acylation with 2-methyl-2-[5-(trifluoromethyl)-2-pyridinyloxy]propionic acid. The compds. of the present invention are useful as centrally acting drugs in the treatment of psychosis, memory deficits, cognitive disorders, migraine, neuropathy, neuro-inflammatory disorders including multiple sclerosis and Guillain-Barre syndrome and the inflammatory sequelae of viral encephalitis, cerebral vascular accidents, and head trauma, anxiety disorders, stress, epilepsy, Parkinson's disease, movement disorders, and schizophrenia. The compds. are also useful for the treatment of substance abuse disorders (including smoking cessation), the treatment of obesity or eating disorders, as well as the treatment of asthma, constipation, chronic intestinal pseudo-obstruction, and cirrhosis of the liver. Thus, I were tested for binding to cannabinoid receptor-1 [IC50 = 2µM].

IT 486460-32-6  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (combination chemotherapy co-drug; hydrazides as cannabinoid receptor modulators)

RN 486460-32-6 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.



L3 ~~ANSWER 43 OF 80~~ CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:298857 CAPLUS

DN 144:338150

TI Amorphous form of a phosphoric acid salt of a dipeptidyl peptidase-IV inhibitor

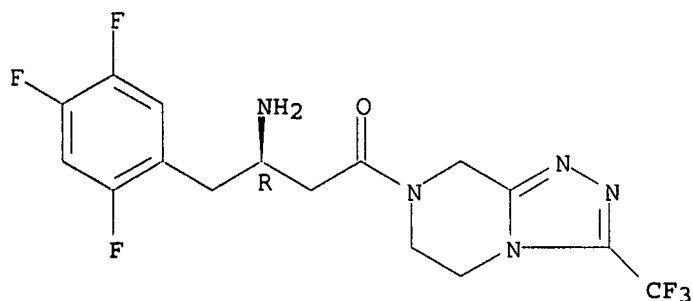
IN Ferlita, Russell R.; Wenslow, Robert M.

PA Merck & Co., Inc., USA

SO PCT Int. Appl., 23 pp.  
 CODEN: PIXXD2

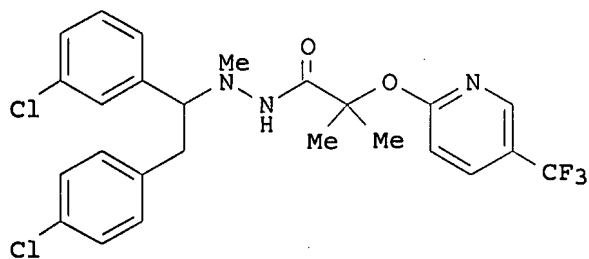
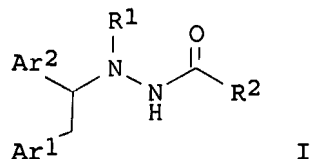
DT Patent

LA English



L3 ~~ANSWER 42701780~~ CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2006:361238 CAPLUS  
 DN 144:412373  
 TI Acyclic hydrazides as cannabinoid receptor modulators  
 IN Lin, Linus S.; Liu, Ping  
 PA Merck & Co., Inc., USA  
 SO PCT Int. Appl., 65 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006041797	A2	20060420	WO 2005-US35560	20051003
	WO 2006041797	A3	20060706		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
PRAI	US 2004-616696P	P	<del>20041007</del>		
OS	CASREACT 144:412373; MARPAT 144:412373				
GI					



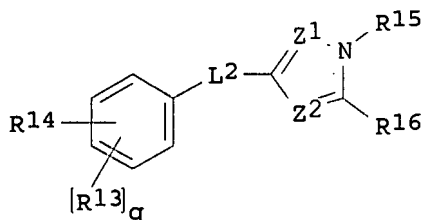


MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,  
 SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,  
 VN, YU, ZA, ZM, ZW  
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,  
 IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,  
 CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,  
 GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM

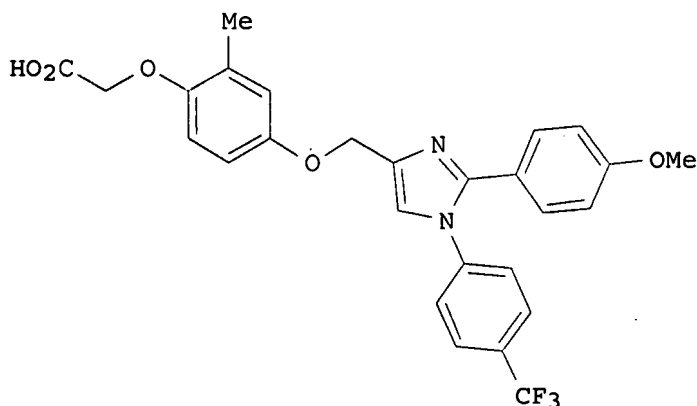
PRAI US 2005-649962P P 20050203

OS MARPAT 145:230633

GI



I



II

AB. The title compds. I [ $q = 0-3$ ;  $Z1, Z2 = CH, N$ ;  $L2 = XOX, XSO0-2X, XSO0-2XO$  (wherein  $X =$  a bond, (un)substituted alkylene);  $R13 =$  halo, alkyl, alkoxy, etc.;  $R14 = XOXC(O)OR17, XC(O)OR17$  ( $X =$  a bond, alkylene;  $R17 = H, alkyl$ );  $R15, R16 = R18$  or  $YR18$  ( $Y =$  alkylene, alkenylene, alkynylene,  $CONR17, OX$ ;  $X =$  a bond, alkylene;  $R17 = H, alkyl$ ;  $R18 =$  cycloalkyl, heterocycloalkyl, aryl, heteroaryl); or  $R15$  and  $R16$  together with the atoms to which  $R15$  and  $R16$  are attached form fused bicyclic or tricyclic heteroaryl], useful in treating or preventing diseases or disorders associated with the activity of the peroxisome proliferator-activated receptor (PPAR) families, particularly the activity of  $PPAR\delta$  (no specific data given), were prepared. Thus, reacting Me (4-hydroxy-2-methylphenoxy)acetate with 4-(chloromethyl)-2-(4-methoxyphenyl)-1-(4-trifluoromethylphenyl)-1H-imidazole (preps. given) followed by hydrolysis afforded 28% II. Also disclosed are pharmaceutical compns. comprising compds. I alone or in combination with other therapeutic agents.

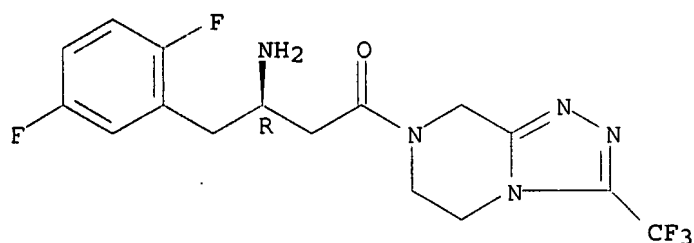
IT 654671-78-0, MK-0431

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(preparation of 4-[(benzimidazolyl/pyrazolyl/triazolyl)methoxy]phenoxyacetic acids as PPAR modulators for treating and preventing diseases-associated with PPAR activity, particularly activity of  $PPAR\delta$ )

RN 654671-78-0 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate (1:1) (CA INDEX NAME)



L3 **ANSWER 31 OF 80** CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2006:761925 CAPLUS  
 DN 145:201985  
 TI Discovery, Structure-Activity Relationship, and Pharmacological Evaluation of (5-Substituted-pyrrolidinyl-2-carbonyl)-2-cyanopyrrolidines as Potent Dipeptidyl Peptidase IV Inhibitors. [Erratum to document cited in CA145:116704]  
 AU Pei, Zhonghua; Li, Xiaofeng; Longenecker, Kenton; von Geldern, Thomas W.; Wiedeman, Paul E.; Lubben, Thomas H.; Zinker, Bradley A.; Stewart, Kent; Ballaron, Stephen J.; Stashko, Michael A.; Mika, Amanda K.; Beno, David W. A.; Long, Michelle; Wells, Heidi; Kempf-Grote, Anita J.; Madar, David J.; McDermott, Todd S.; Bhagavatula, Lakshmi; Fickes, Michael G.; Pireh, Daisy; Solomon, Larry R.; Lake, Marc R.; Edalji, Rohinton; Fry, Elizabeth H.; Sham, Hing L.; Trevillyan, James M.  
 CS Metabolic Disease Research, Advanced Technology, Departments of Exploratory Pharmacokinetics and Pharmaceutics and Process Chemistry Global Pharmaceutical Research and Development, Abbott Laboratories, Abbott Park, IL, 60064-3500, USA  
 SO Journal of Medicinal Chemistry (2006) 49(17), 5387  
 CODEN: JMCMAR; ISSN: 0022-2623  
 PB American Chemical Society  
 DT Journal  
 LA English  
 AB On page 3521, right column, "Results and Discussion" section, last paragraph, the last line is missing the words "then the C5-position" before "...of the P2 pyrrolidine ring...". With the added words, the correct sentence is "Alternatively, upon analyzing the structures of more potent inhibitors, cyanopyrrolidine 2 (Chart 1) and compound 10a, it occurred to us that if the P2 pyrrolidine moiety of compound 10a, it occurred to us that if the P2 pyrrolidine moiety of compound 10a could serve as a rigidified linker to replace the flexible aminino side chain of cyanopyrrolidine 2, then the C5-position of the P2 pyrrolidine ring could be modified to improve potency and other properties."  
 IT 654671-78-0, MK 0431  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (Discovery, Structure-Activity Relationship, and Pharmacol. Evaluation of (5-Substituted-pyrrolidinyl-2-carbonyl)-2-cyanopyrrolidines as Potent Dipeptidyl (Erratum))  
 RN 654671-78-0 CAPLUS  
 CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate (1:1) (CA INDEX NAME)  
 CM 1  
 CRN 486460-32-6  
 CMF C16 H15 F6 N5 O

Absolute stereochemistry.

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006033848	A1	20060330	WO 2005-US32079	20050909
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

PRAI US 2004-610019P P **20040915**

The present invention relates to a novel amorphous form of the dihydrogenphosphate salt of (2R)-4-oxo-4-[3-(trifluoromethyl)-5,6-dihydro[1,2,4]triazolo[4,3-a]pyrazin-7(8H)-yl]-1-(2,4,5-trifluorophenyl)butan-2-amine as well as a process for its prepn., pharmaceutical compns. contg. this novel form, and methods of use of the novel form and pharmaceutical compns. for the treatment of diabetes, obesity, and high blood pressure.

IT 654671-78-0P

RL: PAC (Pharmacological activity); PNU (Preparation, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (amorphous form of a phosphoric acid salt of a dipeptidyl peptidase-IV inhibitor)

RN 654671-78-0 CAPLUS

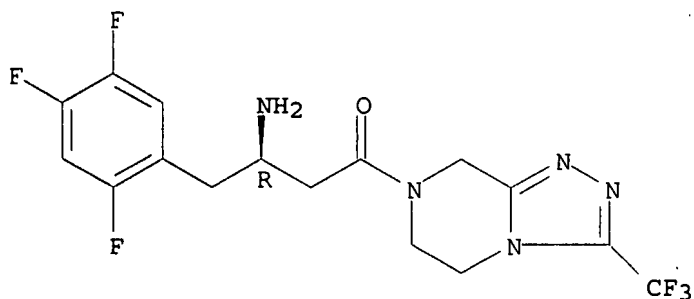
CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate (1:1)  
 (CA INDEX NAME)

CM 1

CRN 486460-32-6

CMF C16 H15 F6 N5 O

Absolute stereochemistry.

L3 **ANSWER 44 OF 80** CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:101593 CAPLUS

DN 144:171188

TI Preparation of glucopyranosyl-glucopyranosides and related compounds as  $\alpha$ -amylase inhibitors

IN Izumi, Masanori; Okuno, Akira; Matsumura, Keiko

PA Sankyo Company, Limited, Japan

SO PCT Int. Appl., 133 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006011588	A1	20060202	WO 2005-JP13912	20050729
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	CA 2575521	A1	20060202	CA 2005-2575521	20050729
	JP 2006063074	A	20060309	JP 2005-219763	20050729
PRAI	JP 2004-222419	A	20040729		
	WO 2005-JP13912	W	20050729		
OS	MARPAT 144:171188				
GI					

AB The present invention provided the preparation of compds. I [A = Q1, etc.; R1, R2 = alkyl, hydroxymethyl, alkoxyethyl, etc.; R3, R4, R5 = alkyl, alkoxy, hydroxyalkyl, etc.; R7 = alkyl, alkoxy, hydroxyalkyl, etc.; n = 1, 2] and medicaments with at least one drug selected from insulin sensitivity enhancers, insulin secretion accelerators, biguanides, insulin pharmaceuticals, and DPP-IV inhibitors. For example, (2R,3R,4R)-4-hydroxy-2-(hydroxymethyl)pyrrolidin-3-yl 4-O-(6-deoxy- $\alpha$ -D-glucopyranosyl)- $\alpha$ -D-glucopyranoside (II) was prepared from D-maltose monohydrate in a multistep process. In  $\alpha$ -amylase inhibition assays, compound II exhibited the IC50 value of 0.7  $\mu$ g/mL. Compds. I are claimed useful for the treatment of diabetes.

IT 654671-78-0  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(medicaments with; preparation of glucopyranosyl-glucopyranosides and related compds. as  $\alpha$ -amylase inhibitors for treatment of diabetes)

RN 654671-78-0 CAPLUS

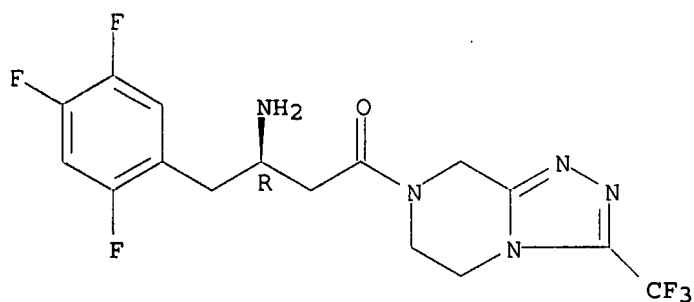
CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-*a*]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate (1:1)  
(CA INDEX NAME)

CM 1

CRN 486460-32-6

CMF C16 H15 F6 N5 O

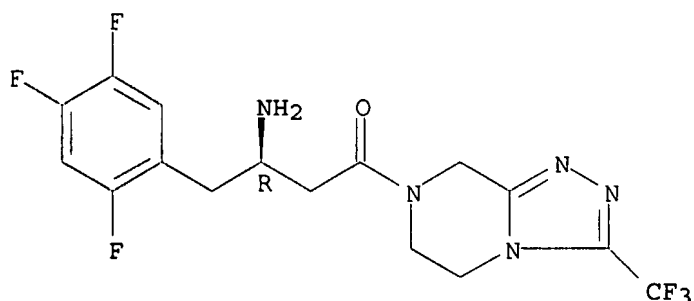
Absolute stereochemistry.



L3 ~~ANSWER 45 OF 80~~ CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2006:82491 CAPLUS  
 DN 145:1093  
 TI Glucagon-like peptide-1-based therapies for the treatment of type 2 diabetes mellitus  
 AU Gallwitz, Baptist  
 CS Department of Medicine, Eberhard-Karls-University, Tuebingen, Germany  
 SO Treatments in Endocrinology (2005), 4(6), 361-370  
 CODEN: TERNAN; ISSN: 1175-6349  
 PB Adis International Ltd.  
 DT Journal; General Review  
 LA English  
 AB A review. The 'incretin effect' describes the phenomenon of an enhanced insulin response following oral ingestion of glucose compared with that after i.v. administration of glucose, leading to identical postprandial plasma glucose excursions. It accounts for up to 60% of the postprandial insulin secretion, but is diminished in patients with type 2 diabetes mellitus. Gastrointestinal hormones that promote the incretin effect are called incretins. Glucagon-like peptide-1 (GLP-1) is an important incretin. Under hyperglycemic conditions in humans, it stimulates insulin secretion and normalizes blood glucose levels. GLP-1 does not stimulate insulin secretion at normal glucose levels; therefore, it does not cause hypoglycemia. Furthermore, it inhibits glucagon secretion and delays gastric emptying. In vitro and animal data have demonstrated that GLP-1 increases  $\beta$ -cell mass by stimulating islet cell neogenesis and by inhibiting the apoptosis of islet cells. The improvement of  $\beta$ -cell function due to GLP-1 can be indirectly observed from the increased insulin secretory capacity of humans receiving such treatment. GLP-1 may represent an attractive therapeutic method for patients with type 2 diabetes because of its multiple effects, including the stimulation of satiety in the CNS by acting as a transmitter or by crossing the blood brain barrier. Native GLP-1 is degraded rapidly upon i.v. or s.c. administration and is therefore not feasible for routine therapy. Long-acting GLP-1 analogs (e.g. liraglutide) and exendin-4 (exenatide) that are resistant to degradation, called 'incretin mimetics', are being investigated in clin. trials. Dipeptidyl peptidase-IV inhibitors (e.g. vildagliptin, sitagliptin, and saxagliptin) that inhibit the enzyme responsible for incretin degradation are also being studied.

IT 654671-78-0, Sitagliptin  
 RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (dipeptidyl peptidase-IV inhibitor sitagliptin that inhibit enzyme responsible for incretin degradation may prove useful therapeutic option for treatment of type 2 diabetes mellitus in patient)

RN 654671-78-0 CAPLUS  
 CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate (1:1)  
 (CA INDEX NAME)



L3 **ANSWER 46 OF 80** CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2006:64377 CAPLUS  
 DN 144:323953  
 TI DPP-4 inhibitor: MK-0431  
 AU Hojo, Minoru  
 CS Clinical Development Institute, Banyu Pharmaceutical Co., Ltd., Japan  
 SO BIO Clinica ((2006)), 21(1), 73-76  
 CODEN: BCILCY; ISSN: 0919-8237  
 PB Hokuryukan  
 DT Journal; General Review  
 LA Japanese  
 AB A review, discussing the action mechanism and clin. pharmacol. of the  
 DPP-4 inhibitor, MK-0431 for treatment of type-2 diabetes.  
 IT 654671-78-0, MK-0431  
 RL: DMA (Drug mechanism of action); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)  
 (action mechanism and clin. pharmacol. of the DPP-4 inhibitor, MK-0431  
 for treatment of type-2 diabetes)  
 RN 654671-78-0 CAPLUS  
 CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-  
 a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate (1:1)  
 (CA INDEX NAME)  
 CM 1  
 CRN 486460-32-6  
 CMF C16 H15 F6 N5 O

Absolute stereochemistry.

L3 **ANSWER 47 OF 80** CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2006:53972 CAPLUS  
 DN 144:121856  
 TI Combination of dipeptidyl peptidase IV (DPP-IV) inhibitors and compounds  
 modulating 5-HT3 and/or 5-HT4 receptors for therapeutic use  
 IN Villhauer, Edwin Bernard  
 PA Novartis A.-G., Switz.; Novartis Pharma G.m.b.H.  
 SO PCT Int. Appl., 43 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006005613	A1	<b>20060119</b>	WO 2005-EP7636	20050713
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,				

LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA,  
NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,  
SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,  
ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,  
IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,  
CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
KG, KZ, MD, RU, TJ, TM

AU 2005261778 A1 20060119 AU 2005-261778 20050713

CA 2573209 A1 20060119 CA 2005-2573209 20050713

EP 1768664 A1 20070404 EP 2005-761596 20050713

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,  
IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR

PRAI US ~~2004-5830117~~ P 20040714

AB The invention discloses a combination, such as a combined preparation or pharmaceutical composition, resp., comprising of a DPP-IV inhibitor or a pharmaceutically acceptable salt thereof and comprising at least one therapeutic agent selected from an agent interacting with a 5-HT3 receptor and/or an agent interacting with 5HT4 receptor, or a pharmaceutically acceptable salt thereof. The invention furthermore discloses the use of such a combination for the prevention, delay of progression, or treatment of diseases and disorders selected from selected from insulin resistance, impaired glucose metabolism, conditions of impaired glucose tolerance, conditions of impaired fasting plasma glucose, diabetes particularly type 2 diabetes mellitus, obesity, diabetic retinopathy, macular degeneration, cataracts, diabetic nephropathy, glomerulosclerosis, diabetic neuropathy, erectile dysfunction, premenstrual syndrome, coronary heart disease, hypertension, angina pectoris, myocardial infarction, stroke, vascular restenosis, skin and connective tissue disorders, foot ulceration's and ulcerative colitis, endothelial dysfunction and impaired vascular compliance, altered gastrointestinal motility, sensitivity and/or secretion disorder(s) which include, but are not limited to, heartburn, bloating, postoperative ileus, abdominal pain and discomfort, early satiety, epigastric pain, nausea, vomiting, burbulence, regurgitation, intestinal pseudoobstruction, anal incontinence, GERD, IBS, dyspepsia, chronic constipation or diarrhea, diabetic gastropathy, gastroparesis, e.g. diabetic gastroparesis, ulcerative colitis, Crohn's disease, ulcers and the visceral pain associated therewith.

IT 654671-78-0, MK-0431

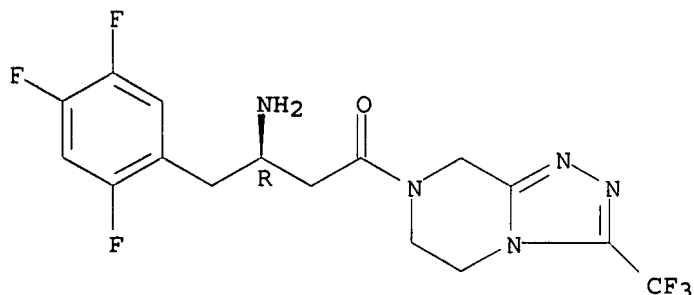
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(dipeptidyl peptidase IV inhibitor combination with compds. modulating 5-HT3 and/or 5-HT4 receptors for therapeutic use)

RN 654671-78-0 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3- $\alpha$ ]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate (1:1) (CA INDEX NAME)

CM 1



L3 ~~ANSWER 48 OF 80~~ CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:1302281 CAPLUS

DN 144:425470

TI Pharmacokinetics and pharmacodynamics of sitagliptin, an inhibitor of dipeptidyl peptidase IV, in healthy subjects: Results from two randomized, double-blind, placebo-controlled studies with single oral doses

AU Herman, Gary A.; Stevens, Cathy; Van Dyck, Kristien; Bergman, Arthur; Yi, Bingming; De Smet, Marina; Snyder, Karen; Hilliard, Deborah; Tanen, Michael; Tanaka, Wesley; Wang, Amy Q.; Zeng, Wei; Musson, Donald; Winchell, Gregory; Davies, Michael J.; Ramael, Steven; Gottesdiener, Keith M.; Wagner, John A.

CS Whitehouse Station, and SGS Biopharma, Merck & Co, Antwerp, Belg.

SO Clinical Pharmacology & Therapeutics (New York, NY, United States) (2005) 78(6), 675-688



PB Elsevier

DT Journal

LA English

AB Background: Sitagliptin (MK-0431 [(2R)-4-oxo-4-(3-[trifluoromethyl]-5,6-dihydro[1,2,4]triazolo[4,3-a]pyrazin-7[8H]-yl)-1-(2,4,5-trifluorophenyl)butan-2-amine]) is an orally active, potent, and selective inhibitor of dipeptidyl peptidase IV (DPP-IV) currently in phase III development for the treatment of type 2 diabetes. Methods: Two double-blind, randomized, placebo-controlled, alternating-panel studies evaluated the safety, tolerability, pharmacokinetics, and pharmacodynamics of single oral doses of sitagliptin (1.5-600 mg) in healthy male volunteers. Results: Sitagliptin was well absorbed (approx. 80% excreted unchanged in the urine) with an apparent terminal half-life ranging from 8 to 14 h. Renal clearance of sitagliptin averaged 388 mL/min and was largely uninfluenced by the dose administered. The area under the plasma concentration-time curve for sitagliptin increased in an approx. dose-dependent manner and was not meaningfully influenced by food. Single doses of sitagliptin markedly and dose-dependently inhibited plasma DPP-IV activity, with approx. 80% or greater inhibition of DPP-IV activity occurring at 50 mg or greater over a 12-h period and at 100 mg or greater over a 24-h period. Compared with placebo, sitagliptin produced an approx. 2-fold increase in postmeal active glucagon-like peptide 1 levels. Sitagliptin was well tolerated and was not associated with hypoglycemia. Conclusions: This study provides proof of pharmacol. characteristics for sitagliptin in humans. By inhibiting plasma DPP-IV activity, sitagliptin increases the postprandial rise in active glucagon-like peptide 1 concns. without causing hypoglycemia in normoglycemic healthy male volunteers. Sitagliptin possesses pharmacokinetic and pharmacodynamic characteristics that support a once-daily dosing regimen.

IT 654671-78-0, Sitagliptin

RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); THU

(Therapeutic use); BIOL (Biological study); USES (Uses)

(single oral dose sitagliptin was well absorbed, tolerated increase plasma postprandial active glucagon-like peptide 1, inhibited dipeptidyl peptidase IV activity and did not cause adverse effect as hypoglycemia in normoglycemic human)

RN 654671-78-0 CAPLUS

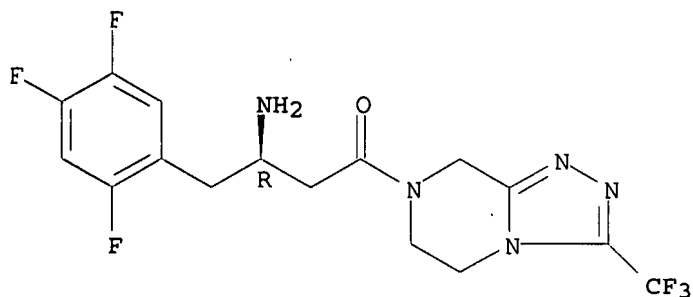
CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate (1:1) (CA INDEX NAME)

CM 1

CRN 486460-32-6

CMF C16 H15 F6 N5 O

Absolute stereochemistry:



AN 2005:1290025 CAPLUS  
 DN 144:36329  
 TI Thiazole compounds as PPAR modulators, their preparation, pharmaceutical compositions, and use in therapy  
 IN Epple, Robert; Cow, Christopher; Xie, Yongping; Wang, Xing; Russo, Ross; Azimioara, Mihai; Saez, Enrique  
 PA IRM LLC, Bermuda  
 SO PCT Int. Appl., 187 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 2

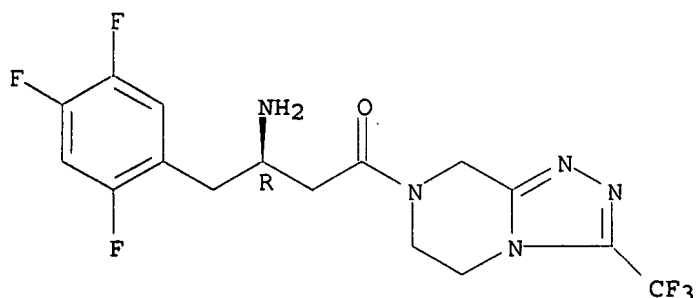
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005116000	A1	20051208	WO 2005-US18167	20050524
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	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2005247931	A1	20051208	AU 2005-247931	20050524
	CA 2563818	A1	20051208	CA 2005-2563818	20050524
	EP 1748993	A1	20070207	EP 2005-754130	20050524
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
	NO 2006005984	A	20070205	NO 2006-5984	20061222
PRAI	US 2004-574137P	P	20040524		
	US 2005-648985P	P	<del>20050131</del>		
	WO 2005-US18167	W	20050524		
OS	MARPAT 144:36329				
GI					

AB The invention relates to thiazole compds. of formula I, which are modulators of peroxisome proliferator-activated receptors (PPAR), particularly PPAR $\delta$ . In compds. I, p is 0-3; L is selected from -XOX-, -XS(O)mX-, and -XS(O)mXO-, where m is 0-2 and X is a bond or (un)substituted C1-4 alkylene; R1 is selected from halo, C1-6 alkyl, C1-6 alkoxy, C1-6 hydroxyalkyl, C1-6 haloalkyl, C1-6 haloalkoxy, (un)substituted C6-10 aryl, (un)substituted C5-10 heteroaryl, (un)substituted C3-12 cycloalkyl, and (un)substituted C3-8 heterocyclyl; R2 is -XOXCO2R5 or -XCO2R5, where X is as defined previously and R5 is H or C1-6 alkyl; and R3 and R4 are independently selected from R6 and R6Y, where R6 is (un)substituted C3-12 cycloalkyl, (un)substituted C3-8 heterocyclyl, (un)substituted C6-10 aryl, and (un)substituted C5-13 heteroaryl, and Y is selected from C1-6 alkylene, C2-6 alkenylene, C2-6 alkynylene, -C(O)N(R5)-, and -OX-, where X and R5 are as defined previously, or R3 and R4, together with the atoms to which they are attached, form fused bi- or tricyclic C5-14 heteroaryl; including pharmaceutically acceptable salts, hydrates, solvates, isomers, and prodrugs thereof. The invention also relates to the preparation of I, pharmaceutical compns. comprising a therapeutically effective amount of compound I in combination with one or more pharmaceutically acceptable excipients, as well as to the use of the compns. to treat or prevent diseases or disorders associated with PPAR activity. Cyclocondensation of 2-bromo-4'-methoxyacetophenone with thioacetamide followed by bromination, demethylation, and alkylation with iso-Pr iodide gave bromothiazole II, which was brominated and substituted with phenol III (preparation in 3 steps

from 4-hydroxy-3-methylacetophenone given) to give thiazole IV. Compound IV underwent Suzuki coupling with 4-(trifluoromethoxy)phenylboronic acid and ester hydrolysis to give thiazole V. Most preferred compds. of the invention express an EC50 value for PPAR $\delta$  of less than 100 nM. The compds. of the invention are at least 100-fold selective for PPAR $\delta$  over PPAR $\gamma$ .

treatment and prevention of diseases associated with PPAR $\delta$  activity)

RN 654671-78-0 CAPLUS  
CN



L3 ~~ANSWER 50 OF 80~~ CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:1289979 CAPLUS

DN 144:36326

TI Oxazole compounds as PPAR modulators, their preparation, pharmaceutical compositions, and use in therapy

IN Epple, Robert; Xie, Yongping; Wang, Xing; Cow, Christopher; Russo, Ross

PA IRM LLC, Bermuda

SO PCT Int. Appl., 75 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005116016	A1	20051208	WO 2005-US18166	20050524
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2005247930	A1	20051208	AU 2005-247930	20050524
	CA 2563819	A1	20051208	CA 2005-2563819	20050524
	EP 1749003	A1	20070207	EP 2005-775612	20050524
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
	NO 2006005983	A	20070205	NO 2006-5983	20061222
PRAI	US 2004-574137P	P	20040524		
	US 2005-649671P	P	<del>20050202</del>		
	WO 2005-US18166	W	20050524		
OS	MARPAT 144:36326				

AB The invention relates to oxazole compds. of formula I, which are modulators of peroxisome proliferator-activated receptors (PPAR), particularly PPAR $\delta$ . In compds. I, p is 0-3; L is selected from

-XOX-, -XS(O)mX-, and -XS(O)mXO-, where m is 0-2 and X is a bond or (un)substituted C1-4 alkylene; R1 is selected from halo, C1-6 alkyl, C1-6 alkoxy, C1-6 hydroxyalkyl, C1-6 haloalkyl, C1-6 haloalkoxy, (un)substituted C6-10 aryl, (un)substituted C5-10 heteroaryl, (un)substituted C3-12 cycloalkyl, and (un)substituted C3-8 heterocyclyl; R2 is -XOXCO2R5 or -XCO2R5, where X is as defined previously and R5 is H or C1-6 alkyl; and R3 and R4 are independently selected from R6 and R6Y, where R6 is (un)substituted C3-12 cycloalkyl, (un)substituted C3-8 heterocyclyl, (un)substituted C6-10 aryl, and (un)substituted C5-13 heteroaryl, and Y is selected from C1-6 alkylene, C2-6 alkenylene, C2-6 alkynylene, -C(O)N(R5)-, and -OX-, where X and R5 are as defined previously, or R3 and R4, together with the atoms to which they are attached, form fused bi- or tricyclic C5-14 heteroaryl; including pharmaceutically acceptable salts, hydrates, solvates, isomers, and prodrugs thereof. The invention also relates to the preparation of I, pharmaceutical compns. comprising a therapeutically effective amount of compound I in combination with one or more pharmaceutically acceptable excipients, as well as to the use of the compns. to treat or prevent diseases or disorders associated with PPAR activity. Diazotization of 4-(trifluoromethoxy)acetophenone followed by heterocyclization with acetonitrile, and bromination gave bromooxazole II, which was brominated and substituted with phenol III (preparation in 3 steps from 4-hydroxy-3-methylacetophenone given) to give oxazole IV. Compound IV underwent Suzuki coupling with 2-isopropoxyipyridin-5-ylboronic acid (preparation from 2-chloro-5-bromopyridine given) and ester hydrolysis to give oxazole V. Most preferred compds. of the invention express an EC50 value for PPAR $\delta$  of less than 100 nM. The compds. of the invention are at least 100-fold selective for PPAR $\delta$  over PPAR $\gamma$ .

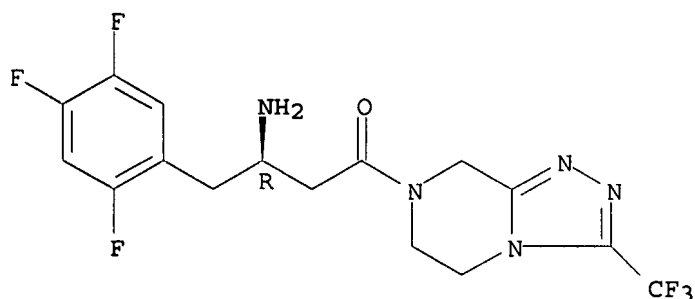
IT 654671-78-0, MK-0431

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(preparation of oxazoles as PPAR modulators and their use for treatment and prevention of diseases associated with PPAR $\delta$  activity)

RN 654671-78-0 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate (1:1) (CA INDEX NAME)



3 **ANSWER 51 OF 80** CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:1262399 CAPLUS

DN 144:22712

TI Triaryl compounds as PPAR modulators, their preparation, pharmaceutical compositions, and use in therapy

IN Epplé, Robert; Azimioara, Mihai

PA Irm LLC, Bermuda

SO PCT Int. Appl., 59 pp.

CODEN: PIXXD2

DT Patent

LA English

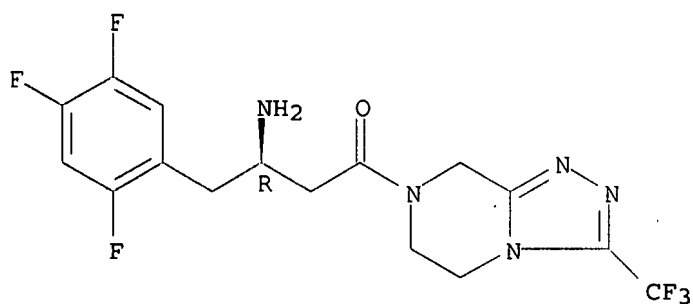
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI WO 2005113506 A1 20051201 WO 2005-US16747 20050513  
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 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,  
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,  
 LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA,  
 NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,  
 SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,  
 ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,  
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
 EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,  
 RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,  
 MR, NE, SN, TD, TG  
 AU 2005245418 A1 20051201 AU 2005-245418 20050513  
 CA 2564365 A1 20051201 CA 2005-2564365 20050513  
 EP 1756062 A1 20070228 EP 2005-751010 20050513  
 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,  
 IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR  
 PRAI US 2004-571004P P ~~20040514~~  
 WO 2005-US16747 W 20050513  
 OS MARPAT 144:22712  
 GI

AB The invention relates to aryl compds. of formula I, which are modulators of peroxisome proliferator-activated receptors (PPAR), particularly PPAR $\delta$ . In compds. I, m is 0-3; X, Y, and Z are independently selected from CH and N; L is (un)substituted (CH<sub>2</sub>)<sub>n</sub>O(CH<sub>2</sub>)<sub>n</sub> or (CH<sub>2</sub>)<sub>n</sub>S(O)<sub>p</sub>(CH<sub>2</sub>)<sub>n</sub>, where each n is independently selected from 0-4 and p is 0-2; R<sub>1</sub> and R<sub>2</sub> are independently selected from (un)substituted C<sub>3</sub>-12 cycloalkyl-A-, (un)substituted C<sub>3</sub>-8 heterocyclyl-A-, (un)substituted C<sub>6</sub>-10 aryl-A-, and (un)substituted C<sub>5</sub>-13 heteroaryl-A-, where A is a bond, C<sub>1</sub>-6 alkylene, C<sub>2</sub>-6 alkenylene, or C<sub>2</sub>-6 alkynylene; R<sub>3</sub> is selected from halo, C<sub>1</sub>-6 alkyl, C<sub>1</sub>-6 alkoxy, C<sub>1</sub>-6 hydroxyalkyl, C<sub>1</sub>-6 haloalkyl, C<sub>1</sub>-6 haloalkoxy, (un)substituted C<sub>6</sub>-10 aryl, (un)substituted C<sub>5</sub>-10 heteroaryl, (un)substituted C<sub>3</sub>-12 cycloalkyl, and (un)substituted C<sub>3</sub>-8 heterocyclyl; and R<sub>4</sub> is selected from (CH<sub>2</sub>)<sub>n</sub>O(CH<sub>2</sub>)<sub>n</sub>CO<sub>2</sub>R<sub>5</sub> and (CH<sub>2</sub>)<sub>n</sub>CO<sub>2</sub>R<sub>5</sub>, where n is as defined previously and R<sub>5</sub> is H or C<sub>1</sub>-6 alkyl; including pharmaceutically acceptable salts, hydrates, solvates, isomers, and prodrugs thereof. The invention also relates to the preparation of I, pharmaceutical compns. comprising a therapeutically effective amount of compound I in combination with one or more pharmaceutically acceptable excipients, as well as to the use of the compns. to treat or prevent diseases or disorders associated with PPAR activity. Substitution of Me bromoacetate with 4-hydroxy-3-methylacetophenone followed by Baeyer-Villiger oxidation and methanolysis gave phenoxyacetate II, which underwent substitution of 3,5-dibromobenzyl bromide to give dibromobenzyl ether III. Treatment of III with an excess of 4-trifluoromethylphenylboronic acid and ester hydrolysis resulted in the formation of terphenyl IV. Most preferred compds. of the invention express an EC<sub>50</sub> value for PPAR $\delta$  of less than 100 nM. The compds. of the invention are at least 100-fold selective for PPAR $\delta$  over PPAR $\gamma$ .

N 654671-78-0 CAPLUS  
 C



L3 ~~ANSWER 52 OF 801~~ CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2005:1259663 CAPLUS  
 DN 144:22911  
 TI Isoxazole compounds as PPAR modulators, their preparation, pharmaceutical compositions, and use in therapy  
 IN Epple, Robert; Russo, Ross; Azimioara, Mihai; Xie, Yongping  
 PA IRM LLC, Bermuda  
 SO PCT Int. Appl., 79 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005113519	A1	20051201	WO 2005-US16672	20050512
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	AU 2005245411	A1	20051201	AU 2005-245411	20050512
	CA 2564429	A1	20051201	CA 2005-2564429	20050512
	EP 1745027	A1	20070124	EP 2005-769154	20050512
	R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR			
PRAI	US 2004-571003P	P	<del>20040514</del>		
OS	WO 2005-US16672	W	20050512		
GI	MARPAT 144:22911				

The invention relates to isoxazole compds. of formula I, which are modulators of peroxisome proliferator-activated receptors (PPAR), particularly PPAR $\delta$ . In compds. I, R<sub>1</sub> is selected from (un)substituted C1-6 alkyl, (un)substituted C3-12 cycloalkyl, (un)substituted C3-8 heterocyclyl, (un)substituted C6-10 aryl, and (un)substituted C5-10 heteroaryl; R<sub>2</sub> is selected from (CH<sub>2</sub>)<sub>n</sub>O(CH<sub>2</sub>)<sub>n</sub>OR<sub>5</sub>, (CH<sub>2</sub>)<sub>n</sub>OR<sub>5</sub>, CO<sub>2</sub>R<sub>5</sub>, C(O)N(R<sub>4</sub>)<sub>2</sub>, C(O)N(R<sub>4</sub>)(CH<sub>2</sub>)<sub>n</sub>OR<sub>4</sub>, CO<sub>2</sub>(CH<sub>2</sub>)<sub>n</sub>OR<sub>5</sub>, C(O)(CH<sub>2</sub>)<sub>n</sub>OR<sub>5</sub>, C(O)N(R<sub>4</sub>)(CH<sub>2</sub>)<sub>n</sub>OR<sub>5</sub>, C(O)N(R<sub>4</sub>)(R<sub>5</sub>), and C(O)N(R<sub>4</sub>)(CH<sub>2</sub>)<sub>n</sub>R<sub>5</sub>, where n is 0-4, R<sub>4</sub> is H or C1-6 alkyl, and R<sub>5</sub> is C1-6 alkyl, C3-12 cycloalkyl, C3-8 heterocyclyl, C6-10 aryl, or C5-10 heteroaryl, or R<sub>4</sub> and R<sub>5</sub>, together with the nitrogen atom to which they are attached, form C3-8 heterocyclyl or C5-10 heteroaryl; and R<sub>3</sub> is selected from (un)substituted C3-12 cycloalkyl, (un)substituted C3-8 heterocyclyl, (un)substituted C6-10 aryl, and (un)substituted C5-10 heteroaryl; including pharmaceutically

acceptable salts, hydrates, solvates, isomers, and prodrugs thereof. The invention also relates to the prepn. of I, pharmaceutical compns. comprising a therapeutically effective amt. of compd. I in combination with one or more pharmaceutically acceptable excipients, as well as to the use of the compns. to treat or prevent diseases or disorders assocd. with PPAR activity. Esterification of 3-bromophenylacetic acid followed by coupling with cyanide, redn. of the nitrile to an aldehyde, condensation with hydroxylamine, and chlorination gave chlorooxime II.

N-Boc-2-bromoethylamine was substituted with 2,4-dichlorophenol followed by deprotection, amidation with Et benzoylacetate to give benzoylacetamide III, which underwent cyclocondensation with chlorooxime II and ester hydrolysis, resulting in the formation of isoxazole IV. Most preferred compds. of the invention express an EC50 value for PPARδ of less than 100 nM. The compds. of the invention are at least 100-fold selective for PPARδ over PPARγ.

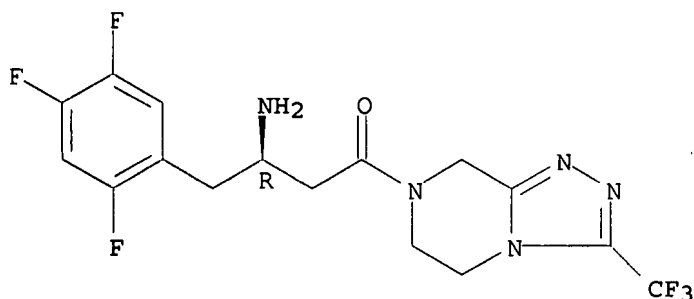
IT 654671-78-0, MK-0431

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(compds. and compns. as PPAR modulators and their use for treatment and prevention of diseases associated with activity of PPAR families, particularly PPARδ)

RN 654671-78-0 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-*a*]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate (1:1) (CA INDEX NAME)



L3 ~~ANSWER 53 OF 80~~ CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:1123877 CAPLUS

DN 143:387377

TI Process for the preparation of enantiomerically enriched β-amino acid derivatives

IN Xiao, Yi; Sun, Yongkui; Rosner, Thorsten; Rivera, Nelo R.; Krska, Shane W.; Clausen, Andrew M.; Armstrong, Joseph D., III; Spindler, Felix; Malan, Christophe

PA Merck & Co., Inc., USA; Solvias A.-G.

SO PCT Int. Appl., 41 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005097733	A1	20051020	WO 2005-US11585	20050405
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,				

AN 2005:823672 CAPLUS  
 DN 143:229851  
 TI Preparation of imidazolyl thiourea derivatives as inhibitors of glutaminy  
 cyclase  
 IN Schilling, Stephan; Buchholz, Mirko; Niestroj, Andre Johannes; Demuth,  
 Hans-Ulrich; Heiser, Ulrich  
 PA Probiodrug A.-G., Germany  
 SO PCT Int. Appl., 122 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005075436	A2	20050818	WO 2005-EP1153	20050204
	WO 2005075436	A3	20051208		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VZ, VN, YU, ZA, ZM, ZW, SM			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	US 2004224875	A1	20041111	US 2004-838993	20040505
	AU 2005210004	A1	20050818	AU 2005-210004	20050204
	CA 2554809	A1	20050818	CA 2005-2554809	20050204
	EP 1713780	A2	20061025	EP 2005-707206	20050204
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS			
	CN 1918131	A	20070221	CN 2005-80004289	20050204
PRAI	US 2004-542133P	P	20040205		
	US 2004-838993	A	20040505		
	US 2004-634364P	P	20041208		
	US 2003-468014P	P	<del>20030505</del>		
	WO 2005-EP1153	W	20050204		
OS	MARPAT 143:229851				
GI					

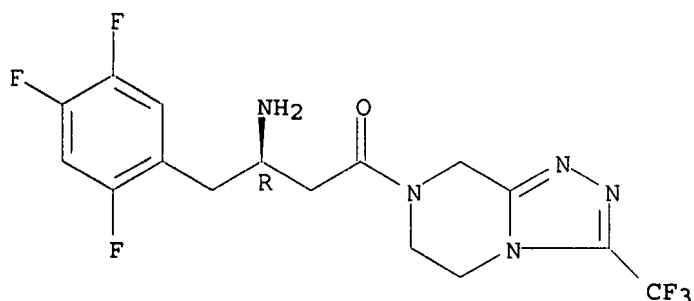
B Title compds. I [A = alkyl, alkenyl, alkynyl, etc.; B = substituted thiourea, urea, amide, etc.] and their pharmaceutical acceptable salts, are prepd. and disclosed as glutaminy cyclase inhibitors. Thus, e.g., II was prepd. by coupling of 1H-imidazole-1-propanamine with the corresponding isothiocyanate. The inhibitory activity of I towards DP IV was evaluated using chromogenic enzyme assay and it was revealed that selected compds. of the invention displayed Ki values in the range of 0.06 up to 204.5 µM. I as glutaminy cyclase inhibitors should prove useful in the treatment of Alzheimer's disease, depression and dementia. Pharmaceutical compns. comprising I are disclosed.

IT 654671-78-0, MK-431  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (claimed co-drugs; preparation of imidazolyl thiourea derivs. as inhibitors of glutaminy cyclase)

RN 654671-78-0 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-alpyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate (1:1) (CA INDEX NAME)





L3 ANSWER 59 OR 30 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:729507 CAPLUS

DN 143:216652

TI Novel crystalline salts of a dipeptidyl peptidase-IV inhibitor

IN Ferlita, Russell R.; Hansen, Karl; Vydra, Vicky K.; Wang, Yaling;  
Lindemann, Christopher M.

PA Merck & Co., Inc., USA

SO PCT Int. Appl., 40 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005072530	A1	20050811	WO 2005-US951	20050112
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	EP 1708571	A1	20061011	EP 2005-705553	20050112
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS			
PRAI	US 2004-537073P	P	20040116		
	WO 2005-US951	W	20050112		

AB Novel crystalline salts of (2R)-4-oxo-4-[3-(trifluoromethyl)-5,6-dihydro[1,2,4]triazolo[4,3-a]pyrazin-7(8H)-yl]-1-(2,4,5-trifluorophenyl)butan-2-amine (I) are potent inhibitors of dipeptidyl peptidase-IV and are useful for the treatment of non-insulin dependent (type 2) diabetes mellitus. The invention also relates to pharmaceutical compns. containing these novel salts, processes to prepare these salts and their

pharmaceutical compns. as well as uses thereof for the treatment of type 2 diabetes. The procedure for preparing I is given.

IT 486460-32-6P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(crystalline salts of dipeptidyl peptidase-IV inhibitor)

RN 486460-32-6 CAPLUS

N 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.

AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
 EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,  
 RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,  
 MR, NE, SN, TD, TG

AU 2005230693	A1	20051020	AU 2005-230693	20050405
CA 2561973	A1	20051020	CA 2005-2561973	20050405
EP 1735269	A1	20061227	EP 2005-732844	20050405

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,  
 IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR

PRAI US 2004-559514P	P	<del>20040405</del>
US 2005-646698P	P	20050124
WO 2005-US11585	W	20050405

OS MARPAT 143:387377

Enantiomerically-enriched  $\beta$ -amino acid derivs. having unprotected amino group were prepd. by enantioselective hydrogenation of an amine-unprotected prochiral  $\beta$ -amino acrylic acid or deriv. in the presence of a rhodium metal precursor complexed with a chiral mono- or bisphosphine ligand. The product chiral  $\beta$ -amino acid derivs. are useful in the asym. synthesis of biol. active mols. Thus, hydrogenation of  $\text{H}_2\text{NCPh:CHCO}_2\text{Me}$  in the presence of  $[\text{Rh}(\text{cod})\text{Cl}]_2$  and a ferrocenyl bisphosphine ligand afforded 92%  $\text{H}_2\text{NCHPhCH}_2\text{CO}_2\text{Me}$ .

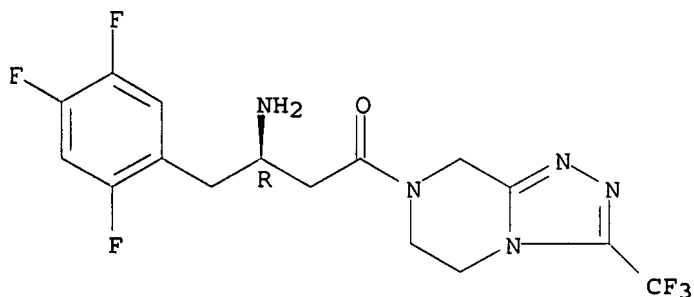
IT 486460-32-6P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of enantiomerically-enriched  $\beta$ -amino acid derivs. by  
 catalytic hydrogenation of  $\beta$ -amino acrylic acids)

RN 486460-32-6 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

Absolute stereochemistry.



was to assess the pharmacokinetic and pharmacodynamic (PK/PD) properties and tolerability of multiple oral once-daily or twice-daily doses of sitagliptin. Methods: This double-blind, randomized, placebo-controlled, incremental oral-dose study was conducted at SGS Biopharma, Antwerp, Belgium. Healthy, nonsmoking male volunteers aged 18 to 45 years with a creatinine clearance rate of >80 mL/min and normoglycemia and weighing within 15% of their ideal height/weight range were randomly assigned to 1 of 8 treatment groups: sitagliptin 25, 50, 100, 200, or 400 mg or placebo, QD for 10 days; a single dose of sitagliptin 800 mg administered on day 1 followed by 600 mg QD on days 3 to 10; or sitagliptin 300 mg BID for 10 days. For anal. of PK properties, plasma and urine samples were obtained before study drug administration on day 1 and at 0.5, 1, 2, 4, 6, 8, 10, 12, and 16 h after study drug administration on day 1; before study drug administration on days 2 to 9; and every 24 h for 96 h after the last dose on day 10, and analyzed for sitagliptin concns. Assays were used to measure inhibition of plasma DPP-IV activity and plasma concns. of active and total glucagon-like peptide-1 (GLP-1), glucose, and glucagon, and serum concns. of insulin, C-peptide, insulin-like growth factor-1, and insulin-like growth factor binding protein-3. Tolerability was assessed throughout the study using phys. examination, including vital sign measurements; 12-lead electrocardiogr.; and laboratory anal., including

hematol.,

biochem. (hepatic aminotransferase and creatine phosphokinase), and urinalysis. Results: Seventy subjects were enrolled (mean age, 32.9 years [range, 18-45 years]; mean weight, 79.7 kg [range, 63.4-97.7 kg]; 8 patients per sitagliptin study group and 14 patients in the control group). In the sitagliptin groups, the plasma concentration-time profiles and principal PK parameters (Tmax, Cmax, and t1/2) were statistically similar at days 1 (single dose) and 10 (steady state). In the groups receiving sitagliptin QD doses, accumulation of sitagliptin was modest (AUC accumulation ratio [day 10/day 1] range, 1.05-1.29), and the apparent terminal elimination t1/2 was 11.8 to 14.4 h. At steady state in the sitagliptin QD groups, the mean proportion of drug excreted unchanged in the urine was .apprx.70.6%. Dose-dependent inhibition of plasma DPP-IV activity was apparent, and the pattern of inhibition at steady state (day 10) was statistically similar to that observed on day 1. Day-10 weighted mean inhibition of plasma DPP-IV activity over 24 h was ≥80% for doses of ≥50 mg QD. After a standard meal, active GLP-1 concns. were significantly increased in the sitagliptin groups by .apprx.2-fold compared with that in the control group, a finding consistent with near-maximal acute glucose lowering in preclin. studies. Across doses, no apparent adverse effects, including hypoglycemia, were found or reported. Conclusions: The results from this study in a select population of healthy male volunteers suggest that multiple oral doses of sitagliptin inhibited plasma DPP-IV activity and affected active GLP-1 concns. in a dose-dependent manner, without producing hypoglycemia. Multiple dosing of sitagliptin exhibited a PK/PD profile consistent with that of a QD regimen and was well tolerated.

IT 486460-32-6, Sitagliptin

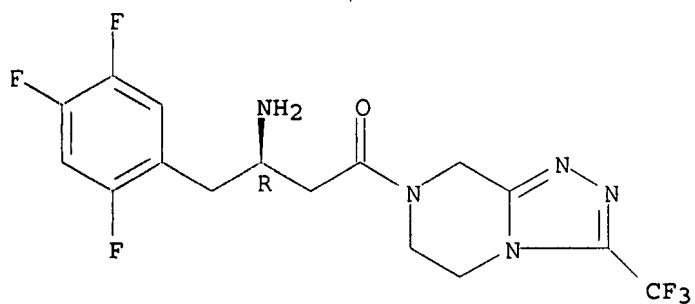
RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(dipeptidyl peptidase-IV inhibitor sitagliptin revealed modest pharmacokinetic profile, inhibited plasma dipeptidyl peptidase-IV and was well tolerated in human)

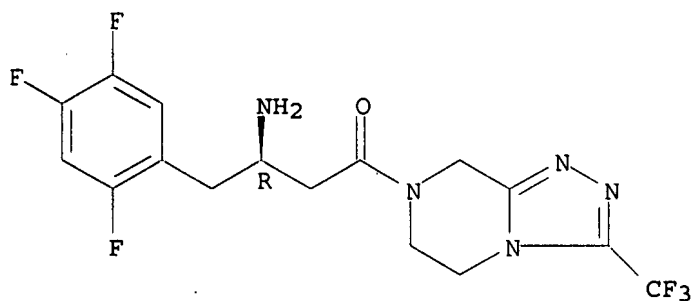
RN 486460-32-6 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-alpyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

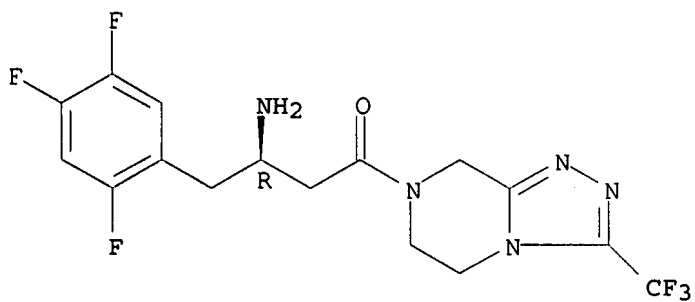
Absolute stereochemistry.



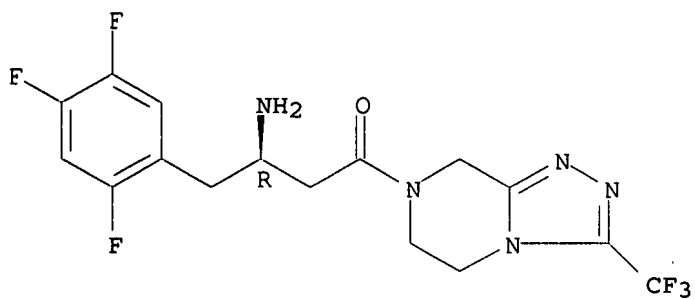
(cryst. salts of dipeptidyl peptidase-IV inhibitor)  
 RN 862156-86-3 CAPLUS



RN 862156-87-4 CAPLUS  
 CN 1,2,4-Triazolo[4,3-a]pyrazine, 7-[(3R)-3-amino-1-oxo-4-(2,4,5-trifluorophenyl)butyl]-5,6,7,8-tetrahydro-3-(trifluoromethyl)-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)



RN 862156-90-9 CAPLUS



143 ANSWER 60 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:696517 CAPLUS  
DN 143:186770  
TI Glutaminyl cyclase inhibitors optionally combined with other agents for the treatment of neuronal disorders  
IN Schulz, Ingo; Schilling, Stephan; Niestroj, Andre Johannes; Heiser, Ulrich; Demuth, Hans-Ulrich; Rossner, Steffen  
PA Probiodrug AG, Germany  
SO U.S. Pat. Appl. Publ., 70 pp., Cont.-in-part of U.S. Ser. No. 976,677.  
CODEN: USXXCO  
DT Patent  
LA English  
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005171112	A1	20050804	US 2004-2169	20041202
	US 2005137142	A1	20050623	US 2004-976677	20041029
	US 2006100253	A1	20060511	US 2005-290735	20051130
	WO 2006058720	A2	20060608	WO 2005-EP12765	20051130
	WO 2006058720	A3	20060727		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRAI US 2003-516717P P 20031103  
US 2004-976677 A2 20041029  
US 2004-2169 A2 20041202  
US 2005-684137P P 20050524

OS MARPAT 143:186770

AB The invention provides a method for the treatment of neuronal disorders in a mammal, e.g. a human, which comprises administering an effective, nontoxic and pharmaceutically acceptable amount of at least one glutaminyl cyclase inhibitor, optionally in combination with at least one agent selected prolyl endopeptidase inhibitors, LiCl, inhibitors of dipeptidyl peptidase IV/DP IV-like enzymes, NPY-receptor ligands, NPY agonists, NPY antagonists, acetylcholinesterase inhibitors, protein isoaspartate carboxymethyl transferase enhancers, inhibitors of  $\beta$ -secretases, inhibitors of  $\gamma$ -secretases and inhibitors of neutral endopeptidase, to a mammal in need thereof.

IT 654671-78-0

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(glutaminyl cyclase inhibitors optionally combined with other agents for treatment of neuronal disorders)

RN 654671-78-0 CAPLUS

143 ANSWER 61 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:673144 CAPLUS  
DN 143:179590  
TI Direct compression formulation for dipeptidylpeptidase IV inhibitors  
IN Kowalski, James; Parthiban, Lakshman Jayanth; Patel, Arun P.  
PA Novartis A.-G., Switz.; Novartis Pharma G.m.b.H.  
SO PCT Int. Appl., 50 pp.  
CODEN: PIXXD2  
DT Patent  
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005067976	A2	20050728	WO 2005-EP400	20050117
	WO 2005067976	A3	20061116		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, SM				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2005205055	A1	20050728	AU 2005-205055	20050117
	CA 2552569	A1	20050728	CA 2005-2552569	20050117
	EP 1715893	A2	20061102	EP 2005-700976	20050117
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
	NO 2006003739	A	20061020	NO 2006-3739	20060821
PRAI	US 2004-537706P	P	<del>20040120</del>		
	US 2004-604274P	P	20040825		
	WO 2005-EP400	W	20050117		

GI

AB Dipeptidylpeptidase IV inhibitor (referred to as DPP-IV) that may be 98.5-100% pure is a high-dose drug capable of being directly compressed with specific excipients into solid form dosage forms, such as tablets and capsules having desired, hardness, disintegrating ability and acceptable dissoln. characteristics. DPP-IV is not inherently compressible and thus presents formulation problems. Excipients used in the formulation enhance the flow and compaction properties of the drug and tableting mix. Optimal flow contributes to uniform die fill and weight control. The binder used ensures sufficient cohesive properties that allow DPP-IV to be compressed using the direct compression method. The tablets produced provide an acceptable in vitro dissoln. profile. A composition contained LAF 237 (I), cellulose, lactose, Na starch glycolate, and Mg stearate.

IT 654671-78-0, MK-0431

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(direct compression formulation for dipeptidylpeptidase IV inhibitors)

RN 654671-78-0 CAPLUS

L3 ~~ANSWER 62 OF 80~~ CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:571490 CAPLUS

DN 144:192453

TI MK-0431 : agent for type 2 diabetes and dipeptidyl-peptidase IV (CD26) inhibitor

AU Sorbera, L. A.; Castaner, J.

CS Prous Science, Barcelona, 08080, Spain

SO Drugs of the Future ~~(2005)~~, 30(4), 337-343

CODEN: DRFUD4; ISSN: 0377-8282

PB Prous Science

DT Journal; General Review

LA English

B A review. The incretin hormone glucagon-like peptide-1 (GLP-1, GLP-1[7-36]amide) plays a crucial role in the regulation of insulin by acting on the pancreas to potentiate glucose-induced insulin secretion. GLP-1 also beneficially slows gastric emptying, reduces appetite and restores  $\beta$ -cell function, and has been the subject of research efforts to develop agents for the treatment of type 2 diabetes. However, GLP-1 has an extremely short half-life and is not suitable for therapeutic use. It is rapidly hydrolyzed by the circulating enzyme

dipeptidyl-peptidase IV (DPP-IV), which cleaves the mol. at the N-terminal, giving rise to the inactive truncated fragment GLP-1(9-36)amide. On the other hand, administration of a DPP-IV inhibitor could enhance the half-life of GLP-1 and could therefore produce the same pleiotropic effects as exogenously administered GLP-1 or GLP-1 analogs. Thus, one of the newer targets for the treatment of diabetes is the serine protease DPP-IV. MK-0431 (Ono-5435) is a novel, potent, orally active  $\beta$ -amino acid-derived DPP-IV inhibitor that has exhibited good pharmacokinetics in mice, rats, dogs and monkeys and was chosen for further development as a treatment for type 2 diabetes. It has been shown to be effective in insulin-resistant mice and mice with diet-induced obesity, and was safe and effective in patients with type 2 diabetes. The agent has reached phase III development as a treatment for this condition.

IT 654671-78-0P, MK 0431

RL: PAC (Pharmacological activity); PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(chemical, pharmacol., pharmacokinetics, and clin. studies of MK-0431 as agent for type 2 diabetes and dipeptidyl-peptidase IV inhibitor)

RN 654671-78-0 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-*a*]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate (1:1)  
(CA INDEX NAME)

AN 2005:493507 CAPLUS  
 DN 143:43869  
 TI Preparation of nitrogen containing bicyclic pyridine-based derivatives as inhibitors of HMG CoA reductase  
 IN O'Connor, Stephen P.; Robl, Jeffrey; Ahmad, Saleem; Bisaha, Sharon; Murugesan, Natesan; Ngu, Khehyong; Shi, Yan; Stein, Philip D.; Soundararajan, Nachimuthu; Natalie, Kenneth J., Jr.; Kolla, Laxma R.; Sausker, Justin; Quinlan, Sandra L.; Fan, Junying; Petsch, Dejah; Guo, Zhenrong  
 PA Bristol-Myers Squibb Company, USA  
 SO PCT Int. Appl., 193 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005051386	A1	20050609	WO 2004-US39051	20041119
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2005171140	A1	20050804	US 2004-989138	20041115
EP 1684754	A1	20060802	EP 2004-811719	20041119
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR, IS, YU				
PRAI US 2003-523546P	P	20031120		
US 2004-989138	A	20041115		
WO 2004-US39051	W	20041119		
OS MARPAT 143:43869				

AN 2005:471999 CAPLUS  
 DN 143:13357  
 TI Combinations containing DPP IV inhibitors for treatment of obesity-related disorders  
 IN Holmes, David Grenville  
 PA Novartis A.-G., Switz.; Novartis Pharma G.m.b.H.  
 SO PCT Int. Appl., 39 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005049088	A2	20050602	WO 2004-EP12989	20041116
WO 2005049088	A3	20051229		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,				



AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,  
NE, SN, TD, TG

AU 2004290896 A1 20050602 AU 2004-290896 20041116  
CA 2545514 A1 20050602 CA 2004-2545514 20041116  
EP 1687030 A2 20060809 EP 2004-797931 20041116

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS

BR 2004016627 A 20070116 BR 2004-16627 20041116  
CN 1901938 A 20070124 CN 2004-80040087 20041116

PRAI US 2003-520564P P 20031117  
WO 2004-EP12989 W 20041116

13 ANSWER 65 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:471952 CAPLUS

DN 143:20035

TI Combinations useful for the treatment of neuronal disorders

IN Schulz, Ingo; Schilling, Stephan; Niestroj, Andre Johannes; Demuth,  
Hans-Ulrich; Rossner, Steffen

PA Probiobdrug A.G., Germany

SO PCT Int. Appl., 123 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005049027	A2	20050602	WO 2004-EP12301	20041029
	WO 2005049027	A3	20060112		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,  
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,  
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,  
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,  
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW,  
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,  
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,  
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,  
SN, TD, TG

AU 2004290499 A1 20050602 AU 2004-290499 20041029  
CA 2544573 A1 20050602 CA 2004-2544573 20041029  
EP 1680120 A2 20060719 EP 2004-791058 20041029

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR

PRAI US 2003-516717P P 20031103  
WO 2004-EP12301 W 20041029

13 ANSWER 66 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:471947 CAPLUS

DN 143:1284

TI Use of organic compounds

IN Pratley, Richard; Foley, James E.; Hughes, Thomas Edward

PA Novartis A.-G., Switz.; Novartis Pharma G.m.b.H.

SO PCT Int. Appl., 35 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005049022	A2	20050602	WO 2004-EP12990	20041116
	WO 2005049022	A3	20050721		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,  
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,

GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2004290897	A1	20050602	AU 2004-290897	20041116
CA 2545641	A1	20050602	CA 2004-2545641	20041116
EP 1686994	A2	20060809	EP 2004-797932	20041116
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS				
BR 2004016628	A	20070116	BR 2004-16628	20041116
CN 1905876	A	20070131	CN 2004-80040508	20041116

PRAI US 2003-520562P P **20031117**  
 US 2003-520563P P 20031117  
 US 2004-547191P P 20040224  
 US 2004-547192P P 20040224  
 WO 2004-EP12990 W 20041116

3 **ANSWER 674 OF 801** CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:419335 CAPLUS

DN 143:125519

TI MK-431 Merck

AU Deacon, Carolyn F.

CS Department of Medical Physiology Panum Institute, University of Copenhagen, Copenhagen N, DK-2200, Den.

SO Current Opinion in Investigational Drugs (Thomson Scientific) **(2005)7** 6(4), 419-426

CODEN: COIDAZ; ISSN: 1472-4472

PB Thomson Scientific

DT Journal; General Review

LA English

AB A review. Merck & Co is developing MK-431, the lead from a series of dipeptidyl peptidase IV inhibitors that enhance endogenous glucagon-like peptide-1 levels, for the potential treatment of type 2 diabetes. Phase III studies were initiated in the second quarter of 2004.

IT 654671-78-0, MK 431

RL: ADV (Adverse effect, including toxicity); DMA (Drug mechanism of action); PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(MK-431 for potential treatment of type 2 diabetic patients)

RN 654671-78-0 CAPLUS

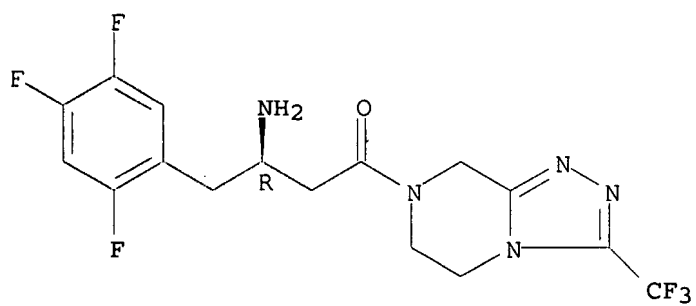
CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-*a*]pyrazin-7(8*H*)-yl]-4-(2,4,5-trifluorophenyl)-, (3*R*)-, phosphate (1:1) (CA INDEX NAME)

CM 1

CRN 486460-32-6

CMF C16 H15 F6 N5 O

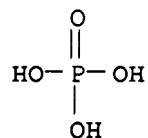
Absolute stereochemistry.



CM 2

CRN 7664-38-2

CMF H3 O4 P



RE.CNT 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

~~ANSWER 68 OF 80~~ CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:405417 CAPLUS  
 DN 142:469248  
 TI Pharmaceutical compositions for enhanced absorption  
 IN Wong, Patrick S. L.; Yan, Dong  
 PA Alza Corporation, USA; Guittard, George V.  
 SO PCT Int. Appl., 92 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005041925	A2	20050512	WO 2004-US36040	20041029
	WO 2005041925	A3	20050929		
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW:				
	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2004285533	A1	20050512	AU 2004-285533	20041029
	CA 2543238	A1	20050512	CA 2004-2543238	20041029
	US 2005158374	A1	20050721	US 2004-978141	20041029
	US 2005163848	A1	20050728	US 2004-978136	20041029
	US 2005163849	A1	20050728	US 2004-978137	20041029
	US 2005163841	A1	20050728	US 2004-978138	20041029
	US 2005165102	A1	20050728	US 2004-978139	20041029
	US 2006094782	A9	20060504		
	US 2005163850	A1	20050728	US 2004-978252	20041029
	EP 1677757	A2	20060712	EP 2004-810118	20041029
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
	CN 1901881	A	20070124	CN 2004-80039649	20041029
	NO 2006002504	A	20060721	NO 2006-2504	20060531
PRAI	US 2003-516259P	P	<del>20031031</del>		
	US 2003-519509P	P	20031112		
	WO 2004-US36040	W	20041029		

~~ANSWER 69 OF 80~~ CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:300188 CAPLUS  
 DN 142:360851  
 TI Novel crystalline form of a phosphate salt of a dipeptidyl peptidase-IV inhibitor  
 IN Chen, Alex M.; Wenslow, Robert M.  
 PA Merck & Co., Inc., USA  
 SO PCT Int. Appl., 26 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005030127	A2	20050407	WO 2004-US30434	20040917
	WO 2005030127	A3	20050526		
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,				

TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,  
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,  
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,  
 SN, TD, TG

EP 1667524 A2 20060614 EP 2004-784324 20040917  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK  
 US 2007021430 A1 20070125 US 2006-570409 20060303

PRAI US 2003-505118P P 20030923  
 WO 2004-US30434 W 20040917

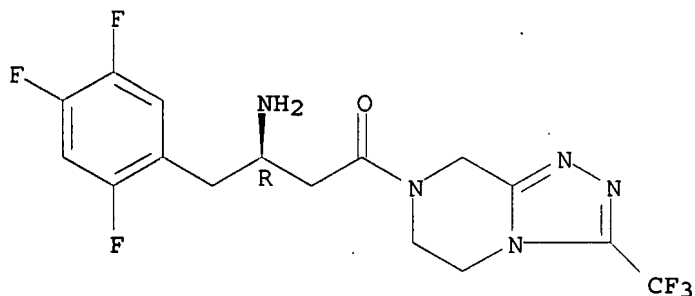
AB The present invention relates to a novel crystalline anhydrate polymorph of the dihydrogen phosphate salt of (2R)-4-oxo-4-[3-(trifluoromethyl)-5,6-dihydro[1,2,4]triazolo[4,3-*a*pyrazin-7(8H)-yl]-1-(2,4,5-trifluorophenyl)butan-2-amine as well as a process for their preparation, pharmaceutical compns. containing this form, and methods of use of the form for the treatment of diabetes, obesity, and high blood pressure.

IT 654671-77-9P 654671-78-0P

RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use);  
 BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (crystalline form of phosphate salt of dipeptidyl peptidase-IV inhibitor)

RN 654671-77-9 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-*a*pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)-, phosphate, hydrate (1:1:1) (CA INDEX NAME)



03 ANSWER 70 OF 180 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:216618 CAPLUS

DN 142:303604

TI Novel crystal forms of a dihydrogen phosphate salt of a triazolopyrazine dipeptidyl peptidase IV inhibitor

IN Wenslow, Robert M.; Armstrong, Joseph D., III; Chen, Alex M.; Cypes, Stephen; Ferlita, Russell R.; Hansen, Karl; Lindemann, Christopher M.; Spartalis, Evangelia

PA Merck & Co., Inc., USA

SO PCT Int. Appl., 49 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005020920	A2	20050310	WO 2004-US27983	20040827
	WO 2005020920	A3	20050428		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,  
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,  
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,  
SN, TD, TG

AU 2004268024 A1 20050310 AU 2004-268024 20040827  
CA 2536251 A1 20050310 CA 2004-2536251 20040827  
EP 1662876 A2 20060607 EP 2004-782460 20040827  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK  
CN 1845674 A 20061011 CN 2004-80025043 20040827  
JP 2007504230 T 20070301 JP 2006-525371 20040827  
US 2006287528 A1 20061221 US 2006-569566 20060227  
PRAI US 2003-499629P P ~~20030902~~  
WO 2004-US27983 W 20040827  
OS CASREACT 142:303604  
GI

~~13~~ ANSWER 71 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:29336 CAPLUS  
DN 142:114455  
TI Preparation of phosphoric acid salt of a  $\beta$ -amino acid amide  
dipeptidyl peptidase-IV inhibitor and its monohydrate  
IN Cypes, Stephen Howard; Chen, Alex Minhua; Ferlita, Russell R.; Hansen,  
Karl; Lee, Ivan; Vydra, Vicky K.; Wenslow, Robert M., Jr.  
PA Merck & Co., Inc., USA  
SO PCT Int. Appl., 33 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005003135	A1	20050113	WO 2004-US19683	20040618
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2004253889	A1	20050113	AU 2004-253889	20040618
	CA 2529400	A1	20050113	CA 2004-2529400	20040618
	EP 1654263	A1	20060510	EP 2004-755691	20040618
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
	JP 2006516268	T	20060629	JP 2005-518292	20040618
	BR 2004011726	A	20060808	BR 2004-11726	20040618
	CN 1832949	A	20060913	CN 2004-80017544	20040618
	US 2005032804	A1	20050210	US 2004-874992	20040623
	NO 2006000362	A	20060323	NO 2006-362	20060123
PRAI	US 2003-482161P	P	<del>20030624</del>		
	WO 2004-US19683	W	20040618		
GI					

~~13~~ ANSWER 72 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:1124587 CAPLUS  
DN 142:69188  
TI Combination therapy for the treatment of diabetes  
IN Erondou, Ngozi E.; Fong, Tung M.; MacNeil, Douglas J.; Van Der Ploeg,

Leonardus H. T.; Kanatani, Akio  
PA Merck & Co., Inc., USA; Banyu Pharmaceutical Co., Ltd.  
SO PCT Int. Appl., 109 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004110375	A2	20041223	WO 2004-US17291	20040602
	WO 2004110375	A3	20050512		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	EP 1635832	A2	20060322	EP 2004-753999	20040602
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK			
PRAI	US 2003-476388P	P	<del>20030506</del>		
	WO 2004-US17291	W	20040602		

OS MARPAT 142:69188

AB The present invention relates to compns. comprising an anti-obesity agent and an anti-diabetic agent useful for the treatment of diabetes, diabetes associated with obesity and diabetes-related disorders. The present invention further relates to methods of treating or preventing obesity, and obesity-related disorders, in a subject in need thereof by administering a composition of the present invention. The present invention further provides for pharmaceutical compns., medicaments, and kits useful in carrying out these methods.

IT 486459-82-9 486459-83-0 486459-84-1  
486459-85-2 486459-88-5 486459-89-6  
486459-97-6 486460-31-5 486460-32-6  
487064-52-8 487064-54-0

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

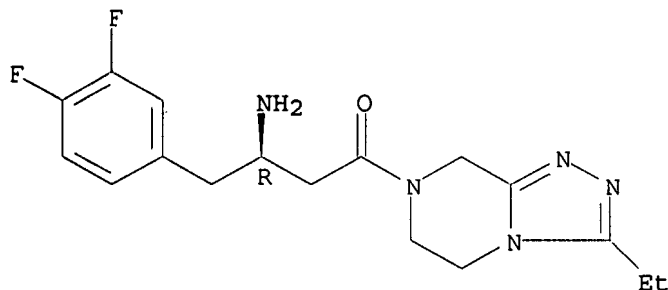
(dipeptidyl peptidase IV inhibitor; combination therapy of diabetes and diabetes-related disorders using antiobesity agent and antidiabetic agent and other agents)

RN 486459-82-9 CAPLUS

CN 1,2,4-Triazolo[4,3-a]pyrazine, 7-[(3R)-3-amino-4-(2-fluorophenyl)-1-oxobutyl]-3-ethyl-5,6,7,8-tetrahydro- (9CI) (CA INDEX NAME)

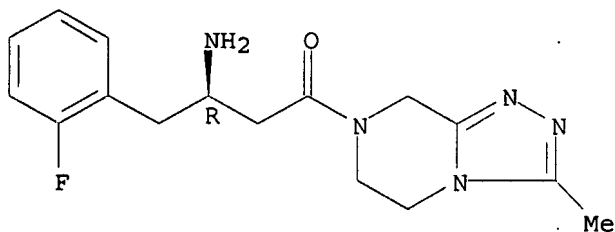
Absolute stereochemistry.

R

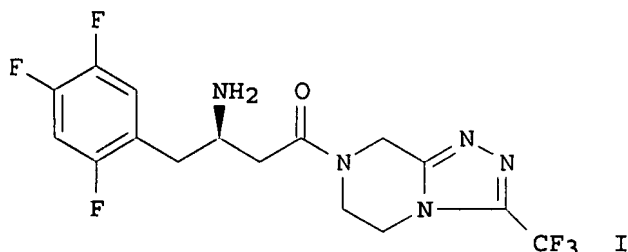


RN 486459-84-1 CAPLUS  
CN 1,2,4-Triazolo[4,3-a]pyrazine, 7-[(3R)-3-amino-4-(2-fluorophenyl)-1-oxobutyl]-5,6,7,8-tetrahydro-3-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 486459-85  
~~3~~ ~~ANSWER 73 OF 80~~ CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2004:1070488 CAPLUS  
DN 142:198023  
TI (2R)-4-Oxo-4-[3-(Trifluoromethyl)-5,6-dihydro[1,2,4]triazolo[4,3-a]pyrazin-7(8H)-yl]-1-(2,4,5-trifluorophenyl)butan-2-amine: A Potent, Orally Active Dipeptidyl Peptidase IV Inhibitor for the Treatment of Type 2 Diabetes  
AU Kim, Dooseop; Wang, Liping; Beconi, Maria; Eiermann, George J.; Fisher, Michael H.; He, Huaibing; Hickey, Gerard J.; Kowalchick, Jennifer E.; Leiting, Barbara; Lyons, Kathryn; Marsilio, Frank; McCann, Margaret E.; Patel, Reshma A.; Petrov, Aleksandr; Scapin, Giovanna; Patel, Sangita B.; Roy, Ranabir Sinha; Wu, Joseph K.; Wyvratt, Matthew J.; Zhang, Bei B.; Zhu, Lan; Thornberry, Nancy A.; Weber, Ann E.  
CS Merck Research Laboratories, Merck & Co., Inc., Rahway, NJ, 07065, USA  
SO Journal of Medicinal Chemistry ~~(2005)~~, 48(1), 141-151  
CODEN: JMCMAR; ISSN: 0022-2623  
PB American Chemical Society  
DT Journal  
LA English  
OS CASREACT 142:198023  
GI



AB A novel series of  $\beta$ -amino amides incorporating fused heterocycles, i.e., triazolopiperazines, were synthesized and evaluated as inhibitors of dipeptidyl peptidase IV (DPP-IV) for the treatment of type 2 diabetes. (2R)-4-Oxo-4-[3-(trifluoromethyl)-5,6-dihydro[1,2,4]triazolo[4,3-a]pyrazin-7(8H)-yl]-1-(2,4,5-trifluorophenyl)butan-2-amine (I) is a potent, orally active DPP-IV inhibitor ( $IC_{50} = 18$  nM) with excellent selectivity over other proline-selective peptidases, oral bioavailability in preclin. species, and in vivo efficacy in animal models. MK-0431, the phosphate salt of I, was selected for development as a potential new treatment for type 2 diabetes.

~~13~~ ~~ANSWER 74 OF 80~~ CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2004:964805 CAPLUS



DN 141:388745  
 TI Preparation of glutaminy cyclase inhibitors for use in treating neurological diseases  
 IN Schilling, Stephan; Niestroj, Andre J.; Heiser, Ulrich; Buchholz, Mirko; Demuth, Hans-Ulrich  
 PA Probiobdrug AG, Germany  
 SO U.S. Pat. Appl. Publ., 34 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004224875	A1	20041111	US 2004-838993	20040505
	WO 2004098591	A2	20041118	WO 2004-EP4773	20040505
	WO 2004098591	A3	20050331		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1620091	A2	20060201	EP 2004-731158	20040505
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
	JP 2006525276	T	20061109	JP 2006-505375	20040505
	AU 2005210004	A1	20050818	AU 2005-210004	20050204
	CA 2554809	A1	20050818	CA 2005-2554809	20050204
	WO 2005075436	A2	20050818	WO 2005-EP1153	20050204
	WO 2005075436	A3	20051208		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, SM				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2005215573	A1	20050929	US 2005-51760	20050204
	EP 1713780	A2	20061025	EP 2005-707206	20050204
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS				
	CN 1918131	A	20070221	CN 2005-80004289	20050204
PRAI	US 2003-468014P	P	20030505		
	US 2004-542133P	P	20040205		
	US 2004-838993	A	20040505		
	WO 2004-EP4773	W	20040505		
	US 2004-634364P	P	20041208		
	WO 2005-EP1153	W	20050204		

OS

13. ANSWER 75 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:857554 CAPLUS

DN 141:314625

TI Process for the preparation of  $\beta$ -amino acid amide dipeptidyl peptidase-IV inhibitors

IN Angelaud, Remy; Armstrong, Joseph D., III; Askin, David; Balsells, Jaume;

Hansen, Karl; Lee, Jaemoon; Maligres, Peter E.; Rivera, Nelo R.; Xiao, Yi;  
Zhong, Yong-Li

PA Merck & Co., Inc., USA

SO PCT Int. Appl., 28 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004087650	A2	20041014	WO 2004-US8826	20040323
	WO 2004087650	A3	20050113		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,  
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,  
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,  
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,  
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,  
BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,  
TD, TG

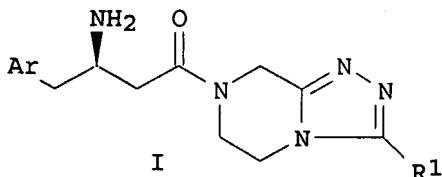
PRAI US 2003-457976P

P

20030327

OS CASREACT 141:314625; MARPAT 141:314625

GI



AB The invention provides a novel process for the preparation of chiral  $\beta$ -amino acid amides I (Ar is Ph which may be substituted by halogen, trifluoromethyl or trifluoromethoxy; R1 is H, alkyl or fluoroalkyl) which are inhibitors of dipeptidyl peptidase-IV and thereby useful for the treatment of Type 2 diabetes. The process involves acylation of 5,6,7,8-tetrahydro-[1,2,4]triazolo[4,3-a]pyrazine (II) or a derivative with a (3R)-3-[(benzyloxy)amino]-4-arylbutanoic acid (III), followed by hydrogenolysis. In an example, I (Ar = 2,5-difluorophenyl, R1 = CF3) was prepared from II.HCl 3-trifluoromethyl derivative (prepared from hydrazine, Et trifluoroacetate, chloroacetyl chloride, and ethylenediamine) and III (Ar = 2,5-difluorophenyl) prepared from 2,5-difluorophenylacetic acid, Meldrum's acid, and O-benzylhydroxylamine hydrochloride.

IT 486460-32-6P 767352-27-2

~~153 ANSWER 76 OF 80~~ CAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:824045 CAPLUS

DN 141:332476

TI Process for preparation of chiral  $\beta$ -amino acid derivatives

IN Dreher, Spencer D.; Ikemoto, Norihiro; Njolito, Eugenia; Rivera, Nelo R.;  
Tellers, David M.; Xiao, Yi

PA Merck & Co., Inc, USA

SO PCT Int. Appl., 39 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI WO 2004085661 A2 20041007 WO 2004-US8533 20040319  
 WO 2004085661 A3 20050310  
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,  
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,  
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,  
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,  
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,  
 BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
 ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
 SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,  
 TD, TG  
 PRAI US 2003-457128P P 20030324  
 US 2003-511210P P 20031015  
 OS CASREACT 141:332476; MARPAT 141:332476  
 GI

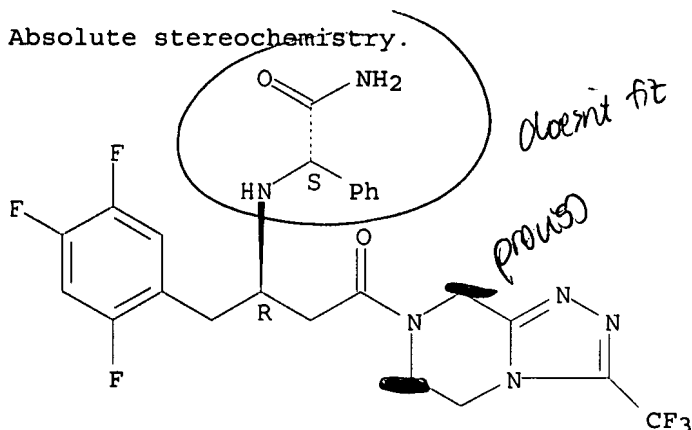
AB A process for the asym. synthesis of enantiomerically enriched  
 $\beta$ -amino acid derivs. I [R1 = H, or alkyl, unsubstituted or  
 substituted with one to five fluorines; R2 = Ph, unsubstituted or  
 independently substituted with one to five substituents: fluorine,  
 trifluoromethyl, or trifluoromethoxy] in a suitable organic solvent is  
 developed, with includes catalytic hydrogenation of Z-enamines II (Y =  
 :CH), which was prepared by addition of L-phenylglycine amide to  
 $\beta$ -ketoesters III under acidic conditions, and subsequent catalytic  
 hydrogenolysis of II (Y = CH<sub>2</sub>). Thus,  $\beta$ -ketoester III (R1 = CF<sub>3</sub>; R2  
 = 2,4,5-trifluorophenyl) obtained from 2,4,5-trifluorophenylacetic acid  
 and 3-(trifluoromethyl)-5,6,7,8-tetrahydro[1,2,4]triazolo[4,4-  
 $\alpha$ ]pyrazine hydrochloride was added to L-phenylglycine amide to give  
 Z-enamine II (R1 = CF<sub>3</sub>; R2 = 2,4,5-trifluorophenyl), which after catalytic  
 hydrogenation in the presence of platinum dioxide, followed by  
 hydrogenolysis with palladium dihydroxide as catalyst gave compound I (R1 =  
 CF<sub>3</sub>; R2 = 2,4,5-trifluorophenyl) in 94.55% yield and 97% ee.

IT 769195-20-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (asym. synthesis of chiral  $\beta$ -amino acid derivs. via addition of  
 phenylglycine amide to triazolopyrazinyl  $\beta$ -ketoesters, followed by  
 catalytic hydrogenation of enamines and catalytic hydrogenolysis)

RN 769195-20-2 CAPLUS

CN Benzeneacetamide,  $\alpha$ -[[[(1R)-3-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-  
 triazolo[4,3-a]pyrazin-7(8H)-yl]-3-oxo-1-[(2,4,5-  
 trifluorophenyl)methyl]propyl]amino]-, ( $\alpha$ S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



catalytic hydrogenation of enamines and catalytic hydrogenolysis)  
 RN 486460-31-5 CAPLUS

AN 2004:817850 CAPLUS  
 DN 141:314350  
 TI Process for the preparation of chiral  $\beta$ -amino acid derivatives by asymmetric hydrogenation of enamino esters and amides using transition-metal complexed chiral ferrocenyldiphosphines.  
 IN Xiao, Yi; Armstrong, Joseph D., III; Krska, Shane W.; Njolito, Eugenia; Rivera, Nelo R.; Sun, Yongkui; Rosner, Thorsten  
 PA Merck & Co. Inc., USA  
 SO PCT Int. Appl., 29 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004085378	A1	20041007	WO 2004-US7793	20040315
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2004223885	A1	20041007	AU 2004-223885	20040315
	CA 2518435	A1	20041007	CA 2004-2518435	20040315
	EP 1606243	A1	20051221	EP 2004-720790	20040315
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK				
	CN 1761642	A	20060419	CN 2004-80007313	20040315
	JP 2006521354	T	20060921	JP 2006-507177	20040315
	US 2006194977	A1	20060831	US 2005-549425	20050915
PRAI	US 2003-455932P	P	20030319		
	WO 2004-US7793	A	20040315		

CASREACT 141:314350; MARPAT 141:314350

AB (R)- or (S)-R<sub>1</sub>CH(NH<sub>2</sub>)CH<sub>2</sub>COZ [Z = OR<sub>2</sub>, SR<sub>2</sub>, NR<sub>2</sub>R<sub>3</sub>; R<sub>1</sub> = alkyl, aryl, heteroaryl, aralkyl, heteroaralkyl; R<sub>2</sub>, R<sub>3</sub> = H, alkyl, aryl, aralkyl; R<sub>2</sub>R<sub>3</sub>N = (substituted) 4-7 membered ring] were prepd in  $\geq 70\%$  enantiomeric excess by hydrogenation of prochiral R<sub>1</sub>(H<sub>2</sub>N)C:CCOZ (variables as above) in the presence of transition-metal complexed chiral ferrocenyldiphosphines in a suitable organic solvent. Thus, (Z)-4-oxo-4-[3-(trifluoromethyl)-5,6-dihydro-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-1-(2,4,5-trifluorophenyl)but-2-en-2-amine (preparation given) was hydrogenated in the presence of chloro(1,5-cyclooctadiene)rhodium(I) dimer and (R,S) tert-Bu Josiphos in MeOH at 200 psi and 50° for 13 h to give 72% (R)-4-oxo-4-[3-(trifluoromethyl)-5,6-dihydro-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-1-(2,4,5-trifluorophenyl)butan-2-amine in 98-99% enantiomeric excess.

IT 486460-32-6P

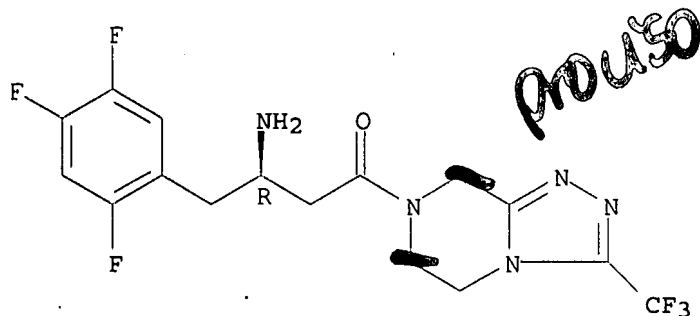
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(preparation of chiral  $\beta$ -amino acid derivs. by asym. hydrogenation of enamino esters and amides using transition-metal complexed chiral ferrocenyldiphosphines)

RN 486460-32-6 CAPLUS

CN 1-Butanone, 3-amino-1-[5,6-dihydro-3-(trifluoromethyl)-1,2,4-triazolo[4,3-a]pyrazin-7(8H)-yl]-4-(2,4,5-trifluorophenyl)-, (3R)- (CA INDEX NAME)

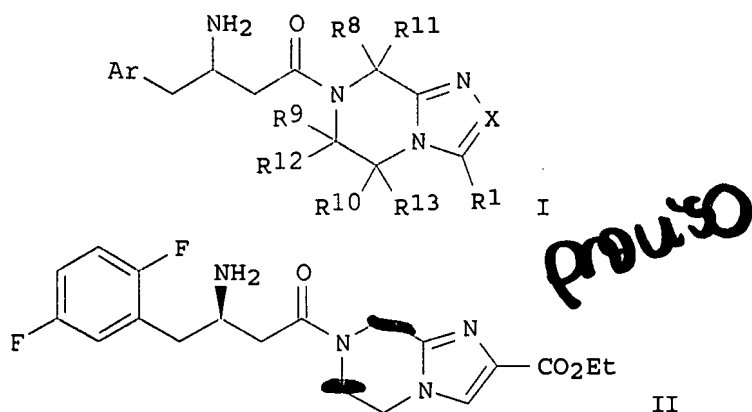
Absolute stereochemistry.



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ~~ANSWER 78 OF 1801~~ CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2004:565099 CAPLUS  
DN 141:123655  
TI Preparation of 3-amino-4-phenylbutanoic acid derivatives as dipeptidyl  
peptidase inhibitors for the treatment or prevention of diabetes  
IN Duffy, Joseph L.; Edmondson, Scott D.; Kim, Dooseop; Kirk, Brian A.; Wang,  
Liping; Weber, Ann E.  
PA Merck & Co., Inc., USA  
SO PCT Int. Appl., 118 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004058266	A1	20040715	WO 2003-US40114	20031216
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,				
CA	2508947	A1	20040715	CA 2003-2508947	20031216
	AU 2003297219	A1	20040722	AU 2003-297219	20031216
	EP 1583534	A1	20051012	EP 2003-814066	20031216
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2006513265	T	20060420	JP 2005-509979	20031216
	US 2006052382	A1	20060309	US 2005-540283	20050620
PRAI	US 2002-435389P	P	<del>20021220</del>		
	US 2003-469315P	P	20030509		
	WO 2003-US40114	W	20031216		
OS	MARPAT 141:123655				
GI					



Title compds. I [wherein X = N or CR<sub>2</sub>; Ar = (un)substituted Ph; R<sub>1</sub>, R<sub>2</sub> = independently H, halo, HO, cyano, (un)substituted alkyl(thio), alkoxy, etc.; R<sub>8</sub>-R<sub>10</sub> = independently H, cyano, carboxy, (un)substituted (cyclo)alkyl, (hetero)aryl, etc.; R<sub>11</sub>-R<sub>13</sub> = independently H, alkyl; with proviso; and pharmaceutically acceptable salts thereof] were prepd. as dipeptidyl peptidase inhibitors (no data). For example, Et 7-[(3R)-3-amino-4-(2,5-difluorophenyl)butanoyl]-5,6,7,8-tetrahydroimidazo[1,2-a]pyrazine-2-carboxylic acid trifluoroacetic acid salt (II•CF<sub>3</sub>CO<sub>2</sub>H) was given in a multiple-step synthesis starting from Et imidazo[1,2-a]pyrazine-2-carboxylate. Thus, I and their pharmaceutical compns. are useful for the treatment or prevention of diseases in which the dipeptidyl peptidase-IV enzyme is involved, such as diabetes and particularly type 2 diabetes (no data).

IT 723286-07-5P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(preparation of 3-amino-4-phenylbutanoic acid derivs. as dipeptidyl peptidase inhibitors for treatment or prevention of diabetes)

RN 723286-07-5 CAPLUS

CN Imidazo[1,2-a]pyrazin-3-amine, 7-[(3R)-3-amino-1-oxo-4-(2,4,5-trifluorophenyl)butyl]-2-cyclopropyl-5,6,7,8-tetrahydro-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

~~Q3~~ ANSWER 79 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:796660 CAPLUS

DN 139:307796

TI Preparation of aminoacylimidazo- and triazolopyrazines as dipeptidyl peptidase inhibitors for the treatment or prevention of diabetes

IN Brockunier, Linda L.; Duffy, Joseph L.; Kim, Dooseop; Parmee, Emma R.; Weber, Ann E.

PA Merck & Co., Inc., USA

SO PCT Int. Appl., 84 pp.  
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003082817	A2	20031009	WO 2003-US8723	20030321
	WO 2003082817	A3	20031218		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS,			

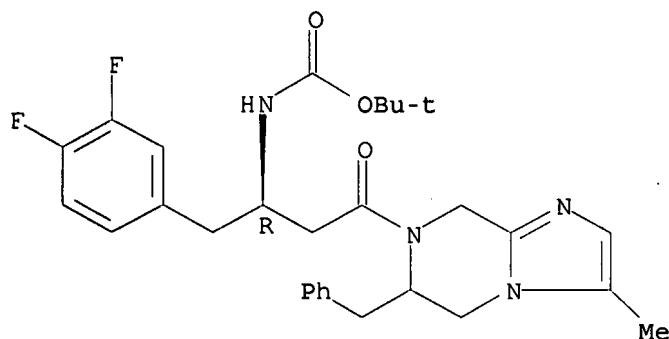
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 PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,  
 UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
 FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 CA 2478389 A1 20031009 CA 2003-2478389 20030321  
 AU 2003225916 A1 20031013 AU 2003-225916 20030321  
 EP 1490335 A2 20041229 EP 2003-745557 20030321  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK  
 US 2005107390 A1 20050519 US 2003-508898 20030321  
 JP 2005526811 T 20050908 JP 2003-580285 20030321  
 PRAI US 2002-367410P P ~~20020325~~  
 WO 2003-US8723 W 20030321

B Title compds. I [Ar = (un)substituted Ph; X = N, (un)substituted CH<sub>2</sub>; R<sub>1</sub> = H, CN, (un)substituted alkyl, Ph, heterocyclic; R<sub>2</sub>, R<sub>3</sub> = H, CN, (un)substituted alkyl, Ph, naphthyl, CO<sub>2</sub>H, CONH<sub>2</sub>, cycloalkyl] were prepd. for use as dipeptidyl peptidase-IV inhibitors in the treatment or prevention of diseases, such as diabetes and particularly type 2 diabetes. Thus, 6-benzyl-3-methyl-5,6,7,8-tetrahydroimidazo[1,2-a]pyrazine was prepd. in 5 steps from 2-benzyloxirane and was acylated with (R)-3,4-F<sub>2</sub>C<sub>6</sub>H<sub>3</sub>CH<sub>2</sub>CH(NHCO<sub>2</sub>CMe<sub>3</sub>)CH<sub>2</sub>CO<sub>2</sub>H and deblocked to give the imidazopyrazine II.

IT 611240-60-9P 611240-63-2P 611240-81-4P  
 611240-83-6P 611240-84-7P 611240-85-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of aminoacylimidazo- and triazolopyrazines as dipeptidyl peptidase inhibitors for the treatment or prevention of diabetes)  
 RN 611240-60-9 CAPLUS  
 CN Carbamic acid, [(1R)-1-[(3,4-difluorophenyl)methyl]-3-[5,6-dihydro-3-methyl-6-(phenylmethyl)imidazo[1,2-a]pyrazin-7(8H)-yl]-3-oxopropyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



Appl# 10/189603  
 PD 7/5/02  
 Prov 7/6/01

~~13~~ ANSWER 80 OF 80 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:42275 CAPLUS  
 DN 138:106717  
 TI Preparation of  $\beta$ -amino tetrahydroimidazo[1,2-a]pyrazines and tetrahydrotriazolo[4,3-a]pyrazines as dipeptidyl peptidase inhibitors for the treatment or prevention of diabetes  
 IN Edmondson, Scott D.; Fisher, Michael H.; Kim, Dooseop; MacCoss, Malcolm; Parmee, Emma R.; Weber, Ann E.; Xu, Jinyou  
 PA Merck & Co., Inc., USA

ftnt 5/2/04  
 6,699,071

SO PCT Int. Appl., 69 pp.

CODEN: PIXXD2

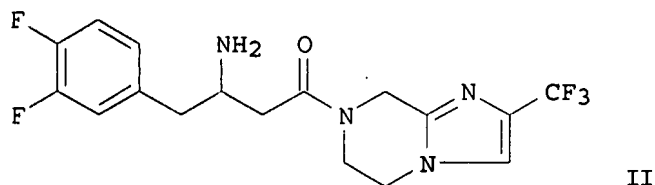
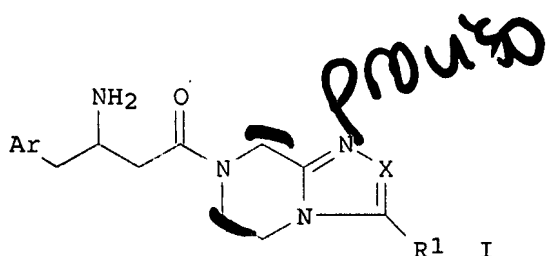
DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003004498	A1	20030116	WO 2002-US21349	20020705
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CA	2450740	A1	20030116	CA 2002-2450740	20020705
	CA 2450740	C	20060214		
	AU 2002320303	A1	20030121	AU 2002-320303	20020705
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	US 6699871	B2	20040302		
	EP 1412357	A1	20040428	EP 2002-749813	20020705
	EP 1412357	B1	20060322		
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	BR 2002010866	A	20040629	BR 2002-10866	20020705
	CN 1524082	A	20040825	CN 2002-813558	20020705
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	JP 2004536115	T	20041202	JP 2003-510665	20020705
	JP 3762407	B2	20060405		
	TW 226331	B	20050111	TW 2002-91114990	20020705
	NZ 529833	A	20050128	NZ 2002-529833	20020705
	EP 1625847	A1	20060215	EP 2005-77584	20020705
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	AT 321048	T	20060415	AT 2002-749813	20020705
	PT 1412357	T	20060731	PT 2002-749813	20020705
	ES 2259713	T3	20061016	ES 2002-2749813	20020705
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	NO 321999	B1	20060731	NO 2004-21	20040105
	IN 2004CN00026	A	20051202	IN 2004-CN26	20040106
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PRAI	US 2001-303474P	P	20010706		
	CN 2002-813558	A3	20020705		
	EP 2002-749813	A3	20020705		
	WO 2002-US21349	W	20020705		
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OS	MARPAT 138:106717				
GI					





AB  $\beta$ -Amino tetrahydroimidazo[1,2-a]pyrazines and tetrahydrotriazolo[4,3-a]pyrazines [e.g., I; wherein Ar = (substituted) phenyl; X = N, CR<sub>2</sub>; R<sub>1</sub>, R<sub>2</sub>, independently = H, CN, (branched) (substituted) (C<sub>1</sub>-C<sub>10</sub>)alkyl, (substituted) Ph, (saturated) 5- or 6-membered heterocycle, etc.] were prepared. For example, 7-[(3R)-3-amino-4-(3,4-difluorophenyl)butanoyl]-2-(trifluoromethyl)-5,6,7,8-tetrahydroimidazo[1,2-a]pyrazine (II) was prepared in several steps. The prepared compds. are inhibitors of the dipeptidyl peptidase-IV enzyme ("DP-IV inhibitors") and, thus, are useful in the treatment or prevention of diseases in which the dipeptidyl peptidase-IV enzyme is involved, such as type 2 diabetes (no data).

IT 486459-65-8P 486459-66-9P 486459-67-0P  
 486459-68-1P 486459-69-2P 486459-70-5P  
 486459-71-6P 486459-72-7P 486459-73-8P  
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 486459-77-2P 486459-78-3P 486459-79-4P  
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 486459-83-0P 486459-84-1P 486459-85-2P  
 486459-86-3P 486459-87-4P 486459-88-5P  
 486459-89-6P 486459-93-2P 486459-94-3P  
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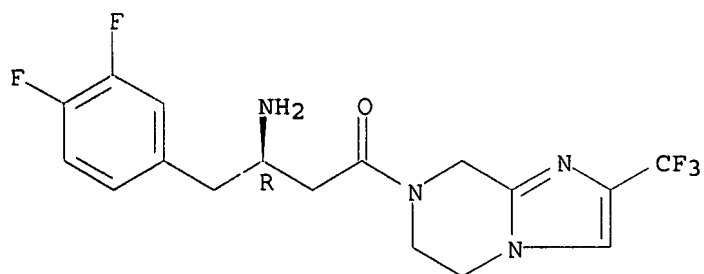
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of  $\beta$ -amino tetrahydroimidazo[1,2-a]pyrazines and tetrahydrotriazolo[4,3-a]pyrazines as dipeptidyl peptidase inhibitors)

RN 486459-65-8 CAPLUS

CN Imidazo[1,2-a]pyrazine, 7-[(3R)-3-amino-4-(3,4-difluorophenyl)-1-oxobutyl]-5,6,7,8-tetrahydro-2-(trifluoromethyl)-, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

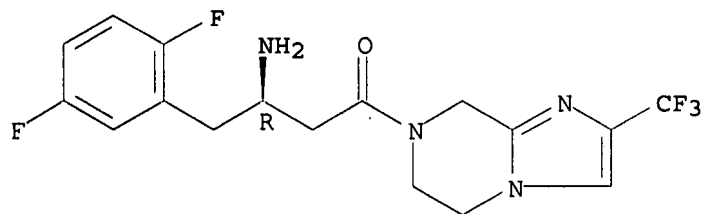


●2 HCl

RN 486459-66-9 CAPLUS

CN Imidazo[1,2-a]pyrazine, 7-[(3R)-3-amino-4-(2,5-difluorophenyl)-1-oxobutyl]-5,6,7,8-tetrahydro-2-(trifluoromethyl)-, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

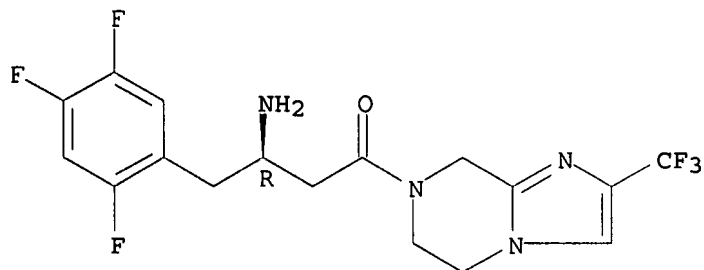


●2 HCl

486459-67-0 CAPLUS

CN Imidazo[1,2-a]pyrazine, 7-[(3R)-3-amino-1-oxo-4-(2,4,5-trifluorophenyl)butyl]-5,6,7,8-tetrahydro-2-(trifluoromethyl)-, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

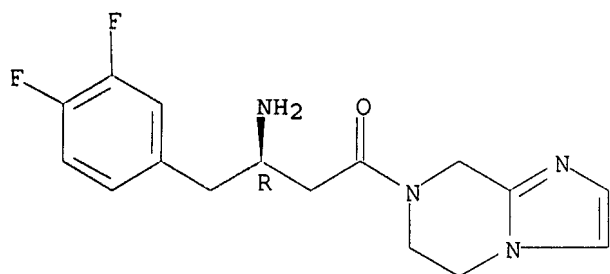


●2 HCl

RN 486459-68-1 CAPLUS

CN Imidazo[1,2-a]pyrazine, 7-[(3R)-3-amino-4-(3,4-difluorophenyl)-1-oxobutyl]-5,6,7,8-tetrahydro-, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

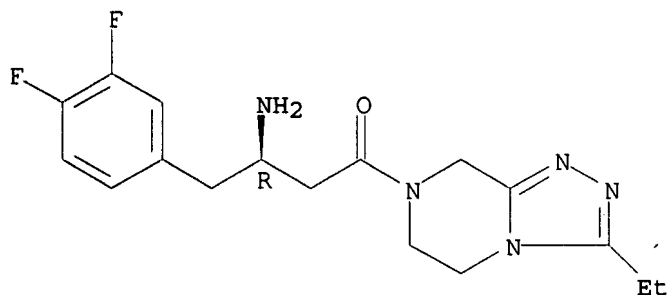


● 2 HCl

RN 486459-69-2 CAPLUS

CN 1,2,4-Triazolo[4,3-a]pyrazine, 7-[(3R)-3-amino-4-(3,4-difluorophenyl)-1-oxobutyl]-3-ethyl-5,6,7,8-tetrahydro-, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

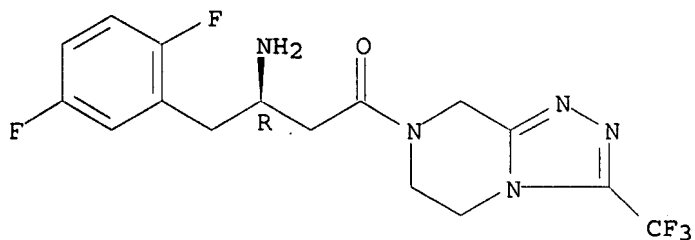


● 2 HCl

486459-70-5 CAPLUS

CN 1,2,4-Triazolo[4,3-a]pyrazine, 7-[(3R)-3-amino-4-(2,5-difluorophenyl)-1-oxobutyl]-5,6,7,8-tetrahydro-3-(trifluoromethyl)-, monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



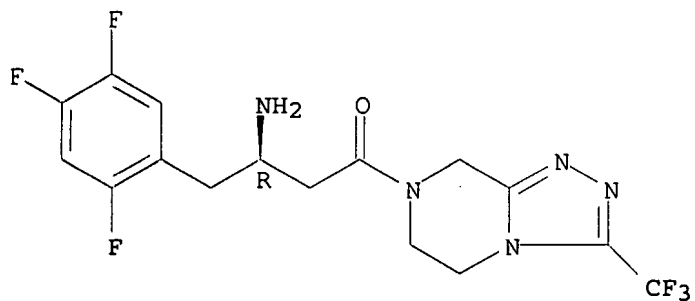
● HCl

RN 486459-71-6 CAPLUS

CN 1,2,4-Triazolo[4,3-a]pyrazine, 7-[(3R)-3-amino-1-oxo-4-(2,4,5-

trifluorophenyl)butyl]-5,6,7,8-tetrahydro-3-(trifluoromethyl)-,  
monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● HCl